

Rock Products

DEVOTED TO THE PRODUCTION
OF ROCK AND ITS PRODUCTS

Vol. V. No. 6.

LOUISVILLE, KY., FEBRUARY 22, 1906.

MANUFACTURED PRODUCTS
AND CONCRETE EDITION

SAND LIME BRICK MACHINERY

NATIONAL SYSTEM

FINLAY SAND DRYER

CLAY WORKING MACHINERY

LIME HYDRATING PLANTS

NATIONAL BRICK MACHINERY CO., 817 Chamber of Commerce, Chicago

DRY UP YOUR TROUBLES

WITH OUR

Drying Machinery and Presses

THE BILES DRIER COMPANY

Both Long Distance Telephones

LOUISVILLE, KENTUCKY

Expert advice in Construction and Operation of

SAND LIME BRICK FACTORIES

PLANS, SPECIFICATIONS and PERSONAL ATTENTION GIVEN YOUR LOCATION BY

W. J. CARMICHAEL,

WELLSBURG, W. VA.

CAPACITY, 60,000 PER DAY.

UNION MINING COMPANY,

ESTABLISHED, 1841.

MANUFACTURERS OF THE
CELEBRATED

"MOUNT SAVAGE" FIRE BRICK

DEVOTE A SPECIAL DEPARTMENT

to the Manufacture of Brick particularly adapted both physically and chemically to
Lime Kiln and Cement Kiln Construction.

Large Stock Carried. Prompt Shipments Made. Write for Quotations on Standard and Special Shapes, to

UNION MINING COMPANY, Mount Savage, Md.

"Howard Cement"

IT IS NON-STAINING.
IT IS WHITE.
IT IS NON-FREEZING.

HOWARD CEMENT PLASTER the most perfect wall plaster made

Favor us with

your inquiries. Howard Hydraulic Cement Co. CEMENT, GEORGIA.



Phoenix Portland Cement UNEXCELLED FOR ALL USES.

Manufactured by

PHOENIX CEMENT CO.

NAZARETH, PA.

Sole Selling Agent WM. G. HARTRANFT, Real Estate Trust Building
PHILADELPHIA, PENNSYLVANIA

"RELIANCE" BELT ABSOLUTELY BEST

FOR GRIFFEN MILLS
FOR TUBE MILLS
FOR BALL MILLS

Chicago Belting Company

MAKERS

67-69 South Canal Street,

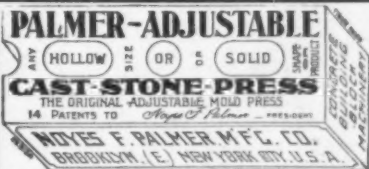
SEND US YOUR SPECIFICATIONS.

CHICAGO, ILL.

THE QUEEN'S RUN FIRE BRICK CO.

Highest Grade
Shapes a Specialty.

LOCK HAVEN, PENNSYLVANIA



Dryers for Sand for Sand Lime Brick

ALSO FOR CLAY, COAL, ETC.

Write For Catalog P. R

American Process Company

62-4 Williams St., New York City.



MARQUETTE PORTLAND CEMENT

Gives Absolute Satisfaction for All Kinds of Concrete Work.

MARQUETTE CEMENT MANUFACTURING CO.,

MILLS: LA SALLE, ILL.

SALES DEPARTMENT: MARQUETTE BLDG., CHICAGO.

Buckeye Portland Cement Co.

ESTABLISHED 1888.
Manufacturers of the celebrated
"Buckeye" brand of



Portland Cement

"Buckeye" has stood the wear and tear in many important places for the past fifteen years and under the new process of manufacture is now better than ever. :: :: :: :: ::

WE INVITE YOUR
CORRESPONDENCE.

Bellefontaine, Ohio.

It Doesn't Stain Bedford Stone



Chattanooga, Tenn., Sept. 6, 1905.

This is to certify, that we have used **HYDRATED PORTLAND LIME** in setting Bedford Stone on the R. S. Faxon residence, Bluff, View, and that we find it perfectly satisfactory in every respect.

Respectfully,

F. A. SUTLIFF, Supt. Masonry.

—WRITE FOR PRICES—

CHICKAMAUGA CEMENT CO.

CHATTANOOGA

TENNESSEE



"LIMOID"
SEWER PIPE
FIRE BRICK
PLASTER, ETC.



Charles Warner Company



LAND TITLE BUILDING,
PHILADELPHIA.
WILMINGTON,
DELAWARE.



A
STANDARD
PORTLAND



FOR
UNIVERSAL
USE

CEMENT DEPARTMENT.
ILLINOIS STEEL COMPANY,
The Rookery, CHICAGO, ILL.

Chicago Portland Cement Co.



MANUFACTURER OF...

"CHICAGO AA"
PORTLAND CEMENT.

We make one brand only.

The best that can be made



ONE GRADE—ONE BRAND.

The Recognized Standard
American Brand.

General Offices: EASTON, PA.

SALES OFFICES:

541 Wood, PITTSBURGH. Builders Exchange, BUFFALO.
Builders Exchange, BALTIMORE. Board of Trade Bldg., BOSTON.
Marquette Building, CHICAGO. Park Row Bldg., NEW YORK.
Harrison Building, PHILADELPHIA.



Manufacturers: Sales Office, Holland Building, St. Louis.

The Best Portland Cement Is

"LEHIGH"

MANUFACTURED BY

**Lehigh Portland
Cement Co.**

ALLENTOWN, PA.



Write for Catalogue.

Capacity, 4,000,000 Yearly.

Tell 'em you saw it in ROCK PRODUCTS.

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Rock Products

DEVOTED TO THE PRODUCTION
OF ROCK AND ITS PRODUCTS

Vol. V. No. 6.

LOUISVILLE, KY., FEBRUARY 22, 1906.

MANUFACTURED PRODUCTS
AND CONCRETE EDITION

THE SUPPLY MEN MEET.

Progressive Discussions Looking to the Promotion of Business, and the Maintenance of Prosperity.

THE QUAKERS ARE GREAT ENTERTAINERS

The seventh annual convention of the National Builder's Supply Association was a pronounced success from every point of view. The attendance, it is true, was not as large as on some former occasions, but the interest in the program and the perfect harmony which existed were evidences of the good fellowship and progressive feeling of the prosperous men who make up the membership, for this is the tie that binds us together.

The meetings were held at the Grand Ball Room of the Bellevue-Stratford Hotel, which is given up to be the greatest ever. Here assembled the leading lights of the builders' supply business from St. Louis, to Boston and many of them brought their ladies to grace the occasion.

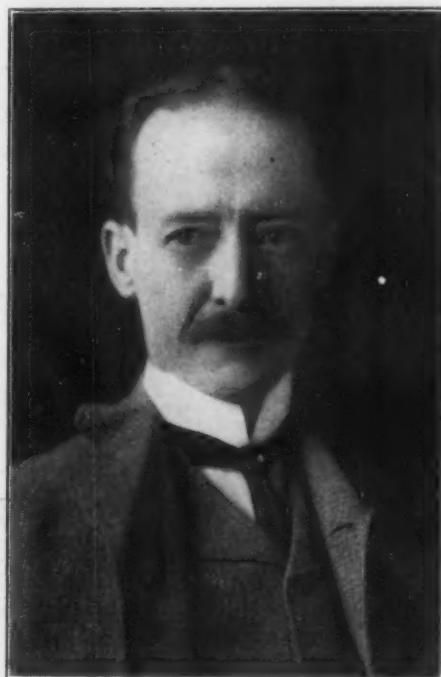
The host had no sooner gathered safely within the hospitable city of Father Penn when the weatherman handed out a bundle of snow storms and northeasters which had a tendency to keep everybody in doors and the delegates of the convention closer to business. The policy that prevailed through all the meeting was "An open door of opportunity and reciprocity as the foundation for a larger growth of the business."

The Philadelphia members of the association were in the lobbies of the hotel to greet the arrivals and they never allowed the visitors to escape them except for strictly business engagements until after adjournment, and even then their hospitality detained the visitors for a day or two. The long established fame of the City of Philadelphia was well maintained by the modern representatives in the Builders' Supply Association, and there was not a single visitor who departed without golden opinions of the cordiality that was so generously expressed on every hand, for are not our Philadelphia friends of to-day true descendants of the first friends who landed on American shores? And truly do those ancient sentiments survive.

THE ATTENDANCE.

[The numbers preceeding each name indicates the official registration.]

- 282 J. R. Haigh, Sydney, Australia.
- 161 H. C. Godfrey, The Sellerman & Godfrey Co., Bridgeport, Conn.
- 77 Wm. H. Smalley, Chas. Warner Co., Wilmington, Del.
- 82 Albert D. Warner, Chas. Warner Co., Wilmington, Del.



GORDON WILLIS, ST. LOUIS, MO., PRESIDENT NATIONAL BUILDERS' SUPPLY ASSOCIATION.

- 83 A. D. Warner, Jr., Chas. Warner Co., Wilmington, Del.
- 170 Charles C. Bye, Chas. Warner Co., Wilmington, Del.
- 210 Irving Warner, Chas. Warner Co., Wilmington, Del.
- 262 H. O. Duerr, National Association of Sand and Lime Products, Wilmington, Del.
- 44 S. D. Lincoln, National Mortar Co., Washington, D. C.
- 55 F. D. Waters, J. G. Waters & Son, Washington, D. C.
- 118 W. W. Shearer, United States Gypsum Co., Washington, D. C.
- 149 C. C. Lamond, Lamond Bros., Lamond, D. C.
- 217 W. A. Kennedy, The General Fireproofing Co., Washington, D. C.
- 305 H. A. Walters, Washington, D. C.
- 1 Frank S. Wright, Meacham & Wright Co., Chicago, Ill.
- 60 A. W. Eisenmayer, Granite City Lime and Cement Co., Granite City, Ill.
- 65 Robert R. Thomas, Hill Cement Co., East St. Louis, Ill.
- 79 W. W. Nicol, Peoria Fuel Co., Peoria, Ill.
- 104 C. M. Treat, Chicago Commercial Association, Chicago, Ill.
- 114 J. L. Avery, United States Gypsum Co., Chicago, Ill., Evanston, Ill.
- 115 S. W. Fulton, United States Gypsum Co., Chicago, Ill., Chicago, Ill.
- 151 H. C. Irwin, H. C. Irwin, Springfield, Ill.
- 171 S. P. Blount, Meacham and Wright Co., Chicago, Ill.
- 193 F. D. Meacham, Meacham & Wright Co., Chicago, Ill.
- 204 John E. Britt, Traders Dispatch, Chicago, Ill.
- 100 A. B. Meyer, A. B. Meyer & Co., Indianapolis, Ind.
- 109 E. H. Moellering, Wm. Moellering & Sons, Fort Wayne, Ind.
- 110 C. E. Moellering, Wm. Moellering & Sons, Fort Wayne, Ind.
- 179 D. L. Mather, Mather Bros., Richmond, Ind.
- 181 Edward M. Baltes, Fort Wayne, Ind.
- 257 H. A. Lensing, Indiana Lime and Cement Co., Evansville, Ind.
- 80 E. H. Defebaugh, Rock Products, Louisville, Ky.
- 81 Fred. K. Irvine, Rock Products, Louisville, Ky.
- 133 T. W. Spinks, Covington, Ky.
- 42 Addison H. Clark, W. W. Clark & Son, Baltimore, Md.
- 43 G. E. Mombhey, W. W. Clark & Son, Baltimore, Md.
- 50 Harry P. Boyd, National Builders' Supply Co., Baltimore, Md.
- 51 John J. Kelly, National Builders' Supply Co., Baltimore, Md.
- 136 Henry W. Classen, Maryland Cement Co., Baltimore, Md.
- 137 Chas. H. Classen, Maryland Cement Co., Baltimore, Md.
- 199 John J. Kelly, Jr., National Building Supply Co., Baltimore, Md.
- 201 Charles H. Claiborne, Union Mining Co., Baltimore, Md.
- 297 Wm. O. Keller, O. J. Keller Lime Co., Frederick, Md.
- 298 H. M. Cramer, O. J. Keller Lime Co., Frederick, Md.
- 39 Ira O. Goodrich, Windsor Cement Co., Boston, Mass.

(Continued on page 39.)



1

The Number of
Re-Inforced concrete Bridges
Built With

Whitehall Portland Cement
Reflects Greatly to its Credit.

3

For Re-Inforced Concrete Steel Chimneys
Whitehall Portland,
Has the Enormous Strength
Which is so Essential.

4

Architects and Engineers Constantly Favor
Whitehall Portland
On Account of its Wonderfully
Uniform Quality.

5 CARDINAL POINTS

....ABOUT....

WHITEHALL PORTLAND CEMENT

2

Sidewalks, Curbing and Gutter Work
When Done With

Whitehall Portland

Require no Further Attention.
Once Done, Forever Finished.

PRINCIPAL SALES OFFICE OF

The Whitehall Portland Cement Company

1719-1723 Land Title Building,
PHILADELPHIA, PA.

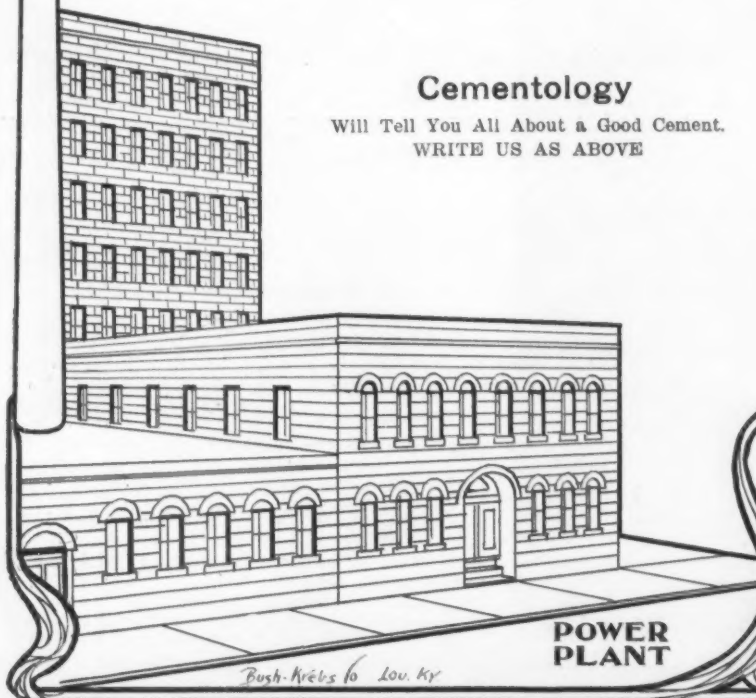
Cementology

Will Tell You All About a Good Cement.
WRITE US AS ABOVE

5

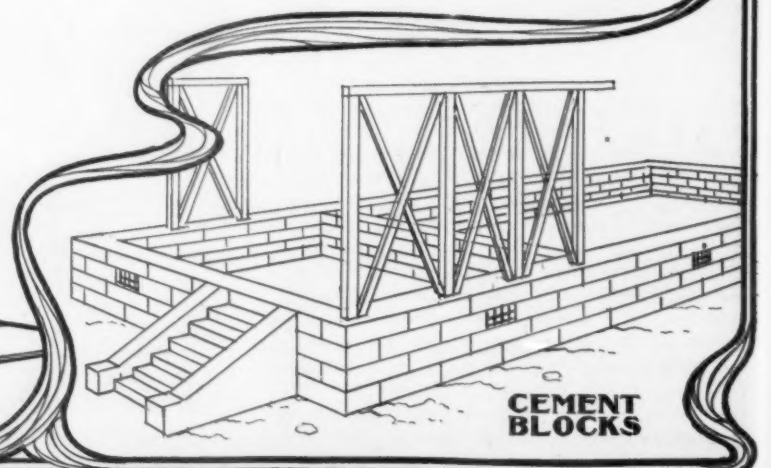
The Ideal Light Colored Cement Building Block
Is Obtained by the Use of

Whitehall Portland.



**POWER
PLANT**

Bush-Knells Co. Lou. Ky



**CEMENT
BLOCKS**

Tell 'em you saw it in ROCK PRODUCTS.

"KOSMOS"

Kosmos Portland Cement is the product of a model plant, using high grade raw materials and under the direction of a staff of experienced cement engineers.

It is guaranteed the equal of any American Brand of Portland Cement and will be found to run uniform



in color, strength and fineness. It is suitable for any class of work and is especially recommended where the requirements are exacting.

Manufactured by the

KOSMOS PORTLAND CEMENT CO., Inc.,

BUSINESS OFFICE: 53-54 Todd Building, Louisville, Ky. WORKS: Kosmosdale, Jefferson Co., Ky.

Louisville Hydraulic Cement.

The best work is the kind that accomplishes all the objects sought at least expense.

Mr. Chas. Hermany, Past President Am. Soc. C. E., says in a letter dated July 4, 1901:

"For many classes of public works Louisville natural cement is as good and reliable as Portland cement, and at a greatly reduced cost in the construction of concrete masonry."

Over 36,000,000 barrels that have gone into actual use attest its merit.

Special slow-setting cement for brick and stone masonry when desired.

Illustrated pamphlets mailed on application.

Western Cement Co.

281 W. Main Street,

Louisville, Ky.

BANNER CEMENT CO., MAKERS OF THE FAMOUS BANNER BRAND OF LOUISVILLE CEMENT.

Guaranteed that 90 per cent. will pass a ten thousand Mesh Sieve.

WE SELL TO DEALERS ONLY.

GENERAL OFFICE: MASONIC TEMPLE, CHICAGO, ILL.

Newaygo Portland Cement Co.

Sales Office: Michigan Trust Building,
GRAND RAPIDS, MICH.

Write us for prices. Send us your orders.

CHARLES W. GOETZ LIME & CEMENT CO.

MANUFACTURERS OF AND DEALERS IN

Glenwood Lime, Banner Brand Louisville Cement, Portland Cements and Building Materials.

St. Louis, Mo.

WESTERN LIME & CEMENT CO., MILWAUKEE, WIS.

Largest Manufacturers of Magnesian White Lime in the United States. Daily capacity, 10,000 Bbls.

Exclusive Northwestern Distributing Agents.

For all the best Lehigh Valley, Pennsylvania, Brands of Portland Cements Direct Importers of German Portlands.

Leading Shippers Throughout the Northwest, of Mason's Building Materials in General.

Tell 'em you saw it in ROCK PRODUCTS.

OWL CEMENT

is not the only Portland Cement,
but one of the best manufactured.
Pamphlet sent on application.

GERMAN-AMERICAN PORTLAND CEMENT WORKS,

E. L. COX, General Sales Agent,
1511 Marquette Building, Chicago, Illinois.

Members Illinois Lumber Dealers Association.

WE SELL TO DEALERS ONLY.

Special Cement Working Machinery

Combination Power Presses for the manufacture of cement tiles, floor tiles, sidewalk blocks, veneering stones and pressed brick.

Hand Presses for New Era cement roofing tiles, ridge rolls and cement shingles.

Stair Steps Molds, the most perfect made.

Curbstone Molds of the most improved style.

Color Mixers for colored cement work.

FURMAN CONSTRUCTION COMPANY

971-979 Bellevue Ave., DETROIT, MICH.

Sole Representatives for the United States and Canada.

Gas Producer Plant of the New England Lime Co., New Milford, Connecticut.

PRODUCER GAS
Makes the Best Lime
It increases the
Capacity of a Plant
and Reduces the
Fuel Bill



The Total Cost of
This Installation
Will be Paid for by
the Saving Effected
During the First
Year of Operation

We are now equipping a second plant for above company at Canaan, Ct.

MORGAN CONSTRUCTION CO., 40 Exchange Place, New York, N. Y.

Works at Worcester, Mass.

"CREAM OF LIME"

Produces the Smoothest,
Hardest and Best Finish.

The **BUCKEYE LIME CO.**

**GENOA,
OHIO.**

Tell 'em you saw it in ROCK PRODUCTS.

OUR HIGH GRADE PRODUCTS



Largest Capacity of Hydrated Lime in the United States.



WOODVILLE WHITE LIME CO., WOODVILLE, OHIO.

WESTERN LIME CO.

HUNTINGTON, INDIANA
MANUFACTURERS OF

LUMP LIME

ALSO, DIAMOND BRAND SUPERIOR WHITE FINISH
A HYDRATED LIME

AND A GROUND AND FERTILIZER LIME

Capacity 4,000 barrels or 10,000 bushels per day. Capacity of Hydrated Lime, 120 tons per day. Our LUMP LIME as well as our HYDRATED LIME is the very best obtainable for all purposes for which a good lime is needed in erecting buildings. Our HYDRATED LIME is absolutely the best finishing lime on the market.

Farnam "Cheshire" Lime Co.

OF CHESHIRE, MASS.
MANUFACTURERS OF THE

Celebrated "Cheshire" Finishing Lime.

Well known throughout New York and the Eastern States as the finest finishing lime manufactured. The special feature of this lime is its quick and even slacking, thus preventing any cracking or checking when put on the wall. It is the best lime used in the country today for all

HIGH GRADE FINISHING WORK

Selling Department, 39 Cortlandt St., N. Y., C. J. CURTIN, Pres't.

The Strongest White Lime

ON THE MARKET

Uniform Quality

Finest Grain


BEST FOR SAND-LIME BRICK and Chemical Purposes

Our building lime has no superior, carries more sand, makes more mortar. Crushed stone for all purposes; Stone dust, and Carbonate of lime. Best facilities for prompt shipments. CORRESPONDENCE SOLICITED.


MITCHELL LIME COMPANY

MITCHELL, INDIANA


Tell 'em you saw it in ROCK PRODUCTS.



Big B



Lime.



BIG B LIME

ITS HISTORY IS A STORY OF SUCCESS.

The Building Trades' Barometer. The Iron and Steel industry promises increased activity. It is predicted that a new tonnage record in that business will be established.

This means a large demand for LIME, and transportation facilities taxed. Isn't it wise to arrange early for your supply of LIME?

BIG B's quality is unsurpassed. That means satisfied and contented contractors for you. Our quick shipping facilities mean fresh lime on short notice.

A POSTAL CARD WILL BRING OUR 1905 MEMORANDUM BOOK.

THE NORRIS AND CHRISTIAN STONE AND LIME CO.
MARION, OHIO.

E. ACHERMAN, Pres.

L. V. UNCAPHER, Sec.

J. W. THEW, Treas.

The

Central Ohio Lime and Stone Co. of Marion, Ohio.

CAPITAL \$150,000.00.

We own One Hundred and Seventy Acres of the best and choicest lime and stone land in Central Ohio. The plant is located north of the city on the Pennsylvania R. R. We are now operating our plant with a large force of the most experienced men that can be found anywhere.

We produce and have the statements to show that we have the best white lime that is on the market. Our furnace stone is pronounced by experts and consumers to be the best they have ever used.

Our kilns and crusher plant are now in full operation and we solicit your patronage. We guarantee our product to be as good as the best, give us a trial order and be convinced of our statement. All orders placed with us will receive prompt attention.

The Central Ohio Lime and Stone Co.

ROCHESTER LIME CO.

209 Main St., West, Rochester, N. Y.

MASON'S SUPPLY DEPOT.

Manufacturers of, and Wholesale Dealers in

Snow Flake Lime, Cement Building Blocks, Alpha Portland Cement, Hoffman Rosendale Cement, Cummings Akron Cement, Kings Windsor Wall Plaster, Kings Plaster Paris, Fire Brick, Fire Clay, Dynamite, Caps, Exploders, etc.

FOWLER & PAY,

Brown Hydraulic Lime, Austin Hydraulic
Cement, Jasper Wall Plaster, Brick, Stone.

CEMENT WORKS: Austin, Minn.
PLASTER MILL: Ft. Dodge, Iowa.
WAREHOUSE: Minnesota Transfer.

MANKATO, MINN.

Tell 'em you saw it in ROCK PRODUCTS.

Swindell Patent Cement Burner

Six kilns in operation at Diamond Portland Cement Co.

Swindell Patent Lime Burner

Nine kilns in operation at Toledo White Lime Co.

The Only Successful Methods of burning Portland Cement and Lime by
Producer Gas. Economical.—Increased Output.—Saving in Fuel.

Wm. Swindell & Bros., German National Bank Bldg.,
PITTSBURG, PENNSYLVANIA.



**ASH GROVE
WHITE LIME ASSOCIATION**
MANUFACTURERS OF
**High Grade
White Lime.**
KANSAS CITY, MISSOURI.

PURE CARBONATE OF LIME FOR ASPHALTING.

We also manufacture Eichel's Blue River Lime.

We have low freight rates to all points.
Can make prompt shipments. Ground
to any fineness. Let us send you sam-
ple. Quarries, Milltown, Indiana, on
Southern Railway.

EICHEL LIME & STONE COMPANY,
General Office, Eichel Block, EVANSVILLE, IND.

ANALYSIS OF OOLITE STONE

found in quarries of Eichel Lime &
Stone Co., as made by Mr. W. S.
Blatchley, Indiana State Geologist.

Calcium Carbonate.....	98.91
Iron Oxide and Aluminum.....	.15
Magnesia Carbonate.....	.63
Insoluble Hydrochloric Acid.....	.48
	100.17

The Ohio Lime Company,

MANUFACTURERS OF AND WHOLESALE DEALERS IN

WORKS AT

Fostoria, Ohio.
Gibsonburg, Ohio.
Sugar Ridge, Ohio.
Tiffin, Ohio.

Ohio White Finishing Lime,
Ground Lime, Lump Lime,
Fertilizer, Hydrate Lime,
Cement, Plaster,
Hair, &c.

Capacity
3500 Barrels
Per Day.

OFFICE:

309-210-211 CHAMBER OF COMMERCE BUILDING.

TOLEDO, OHIO.



Get right, use
"Leviathan"

ONE SAYS:

The reason why we use "LEVIATHAN" Belting in preference to all others is that we find it in efficiency and durability at least 50 per cent. in excess of the best special faced rubber belting obtainable.

(Signed) LAKE COUNTY GRAVEL CO.
By W. T. EATON, Treas.

MAIN BELTING COMPANY, Manufacturers.
55-57 Market Street, CHICAGO, ILL.

PHILADELPHIA, 1218 Carpenter St.

BOSTON, 120 Pearl St.

BUFFALO, 40 Pearl St.



MAURICE GANDY,
Inventor.

The Genuine Gandy
Stitched Cotton Duck Belting

is adaptable to all sorts of conditions, and all kinds of outdoor and indoor work.

There in a nutshell is the reason why it is superior to leather or rubber belting. Another reason is that it costs less and lasts longer.

Trying conditions only prove the superior qualities of Gandy Belting the more conclusively, whether you use them as conveyors or as transmitters of power.

We are now stamping our Belting "Genuine Gandy Belt" instead of "Original Gandy Belt," every ten feet. But either stamp assures you of getting the real and only Gandy Belt.

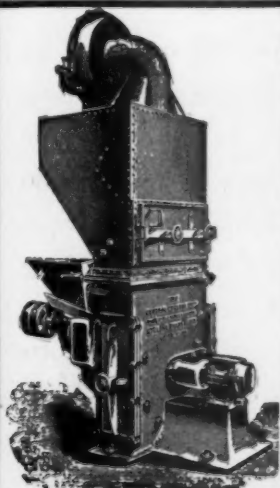


U. S. Pat. Office.

The Sign of the
Best Belt.

The Gandy Belting Co., BALTIMORE, MARYLAND.

Cyclone
PULVERIZER.



STRAKER'S PATENT.

AIR SEPARATION—The product can be made of any desired fineness without sieving.

DUSTLESS in operation.

OUTPUT per H. P. per hour of the Cyclone Mills is much larger than that of any other mills.

We build SCREEN SEPARATION MILLS too.

CATALOGUE on request.

WRITE US WITH SAMPLES AND PARTICULARS.

E. H. STROUD & CO.

Manufacturers for U. S., Canada & Mexico.

30-36 La Salle Street,

CHICAGO, U. S. A.

DRYERS

TO DRY

Any Material

Built to meet requirements in
the most Economical Manner.

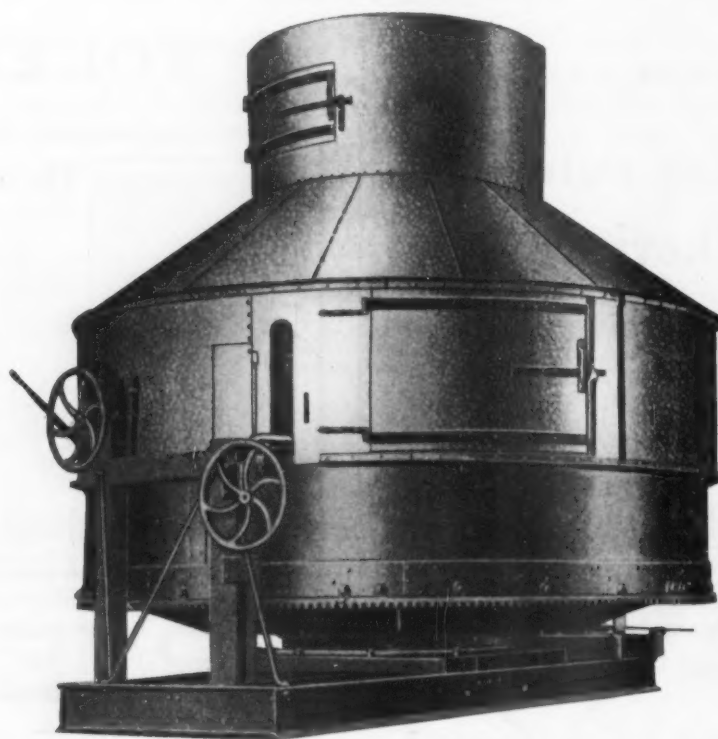
—BY—

J. R. ALSING CO.

136 Liberty St., NEW YORK

Tell 'em you saw it in ROCK PRODUCTS.

Hydrated Lime



It's
no
longer
a
question



But that there is a large and growing demand for hydrated high Calcium (or fat) lime. The coming season is bound to be a prosperous one, and the demand for this material will be a hundred times greater than the supply.

The above cut shows hydrating machine with galvanized iron hood as arranged for high Calcium or high Carbonate lime. No one disputes the fact of our success in Hydrating Magnesium or Dolomitic Limes, but we have been equally successful in hydrating high Calcium lime by our process and machinery. We do not change the physical characteristics one iota, if it is a good working lime when slaked from the lump we guarantee to hydrate it and not change its working qualities or make it work "short," but improve its quality by eliminating all clinkers, cinders and unburned cores.

You take no chances. We have long since passed the experimental stage, and are in position to guarantee positive results. WRITE FOR BOOKLET AND SAMPLE.

CLYDE IRON WORKS,
DULUTH, MINN.

tell 'em you saw it in ROCK PRODUCTS.

Chicago Improved Cube Concrete Mixer

"IT HAS NO INSIDES"

This means a saving of \$2.00 per day. \$50.00 per month.
This on cleaning only. A self-cleansing mixer is a joy.

In a cube the sand, stone and cement are introduced in any order. No preliminary mixing is necessary.

They come out as perfect concrete.

With spirals in a trough mixer the material is fed along and comes out as it goes in. The spiral feeds and the water is supposed to do the mixing.

With deflectors the aggregates are simply divided and thrown around. The water is depended on to distribute the cement.

The cube has no deflectors or spirals. It draws the materials out at the sides, doubles them over on top and shakes them 90 times per minute from side to side.

It makes perfect concrete in 15 revolutions. No other mixer can do as well in double the time. Quality considered you save 10 cents per yard with the cube mixer, which amounts to many dollars each season.

You never have to pound it. The concrete does not stick. You have no insides to clean.

Send for catalogue No. 16.
Many sizes.

MANUFACTURED BY

MUNICIPAL ENGINEERING & CONTRACTING CO.

600 Railway Exchange, Chicago, U. S. A.

We deem it a personal favor when inquirers mention paper in which our advertisement was seen.



THE KENT PULVERIZER

Takes one inch feed. Grinds to any fineness
from 10 to 200 mesh.

GRINDS PER HOUR WITH LESS THAN 25 H. P.

CEMENT CLINKER,	40 bbls.	to 98%	20 Mesh.
CEMENT CLINKER,	12 "	" "	100 "
LIMESTONE,	2½ tons	" "	200 "
LIME,	4 "	" "	100 "
ROSENDALE CEMENT,	43 bbls.	" 90%	50 "
QUARTZ TRAP-ROCK,	4 tons	" "	40 "

**You can easily figure from this what a
Kent Mill would save for you.**

W. J. BELL, Esq. Supt.
NEWAYGO PORTLAND CEMENT CO.,
Newaygo, Mich.

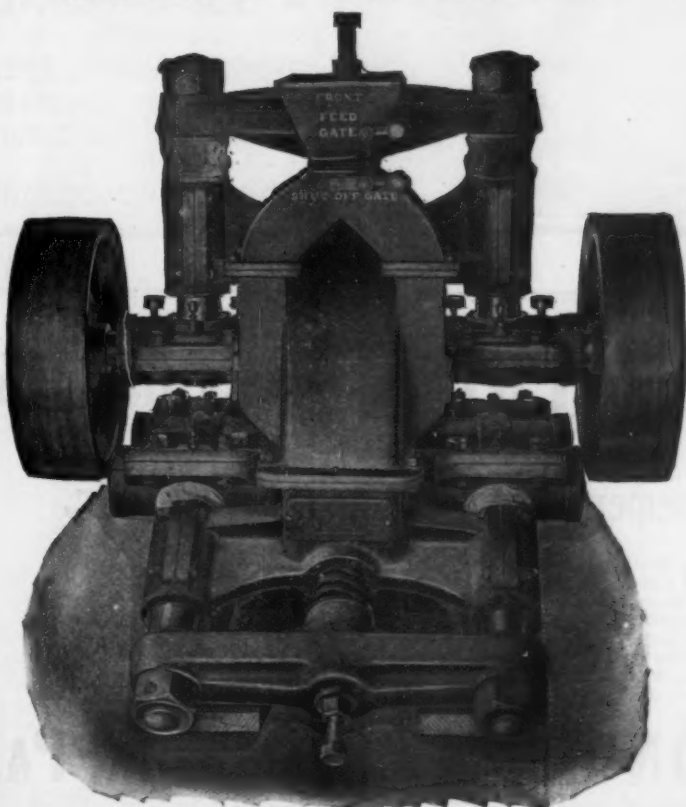
Says:—Four KENT MILLS are driven by one 75 H. P. motor.

For Catalogs and Information, Address

KENT MILL CO.

170 Broadway,

NEW YORK.



Tell 'em you saw it in ROCK PRODUCTS.

AUSTIN MACHINERY GIVEN HIGHEST AWARDS OVER ALL COMPETITORS

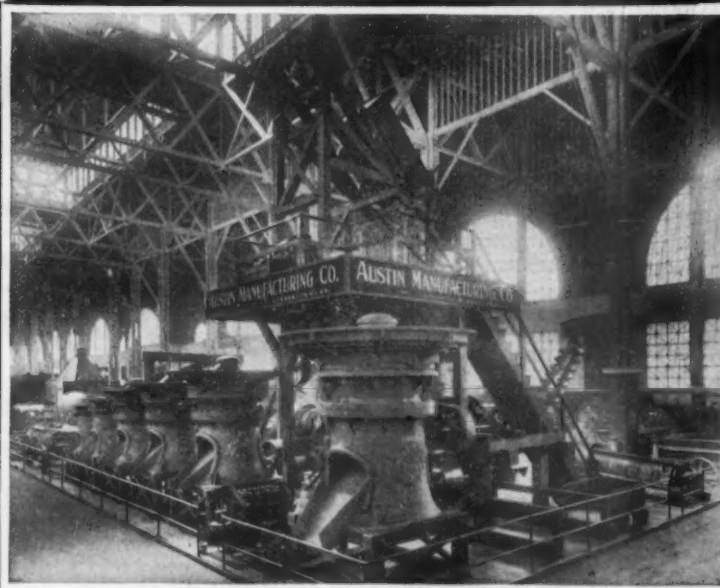
TWO GRAND PRIZES
THREE GOLD MEDALS

AT
WORLD'S FAIR
ST. LOUIS
1904

AUSTIN MANUFACTURING CO.
CHICAGO

The AUSTIN GYRATORY CRUSHER EXHIBIT

was the ONLY Gyratory Crusher
Exhibit to be given both the
GRAND PRIZE
AND A GOLD MEDAL
thus officially stamping
THE AUSTIN GYRATORY CRUSHER
by the
International Jury
as the
**HIGHEST TYPE OF GYRATORY
CRUSHER IN THE WORLD**



The AUSTIN ROAD AND CONTRACTORS MACHINERY in a separate Exhibit was awarded

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AND
A GOLD MEDAL

being the
HIGHEST AWARDS EVER
GIVEN to one Company for
Machinery of that Nature
in the
HISTORY OF WORLDS FAIRS



Mica Schist or Fire Stone Linings

—FOR—

Lime Kilns, Bessemer Converters and Cupolas, Etc.

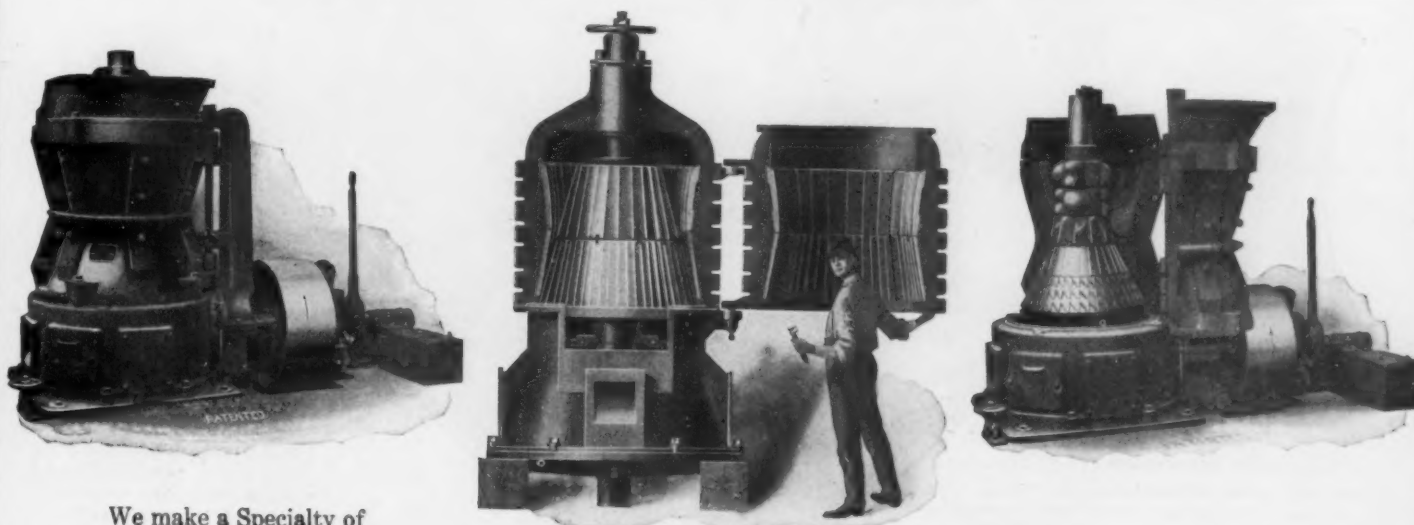
Used in place of Fire Brick. It costs less and lasts longer. Any mason or person that can build a stone wall can lay it. It comes out of the ground in irregular shapes and sizes. It looks like building stone. It is easily broken by a hammer. The small pieces and crumbs can be mashed up and mixed with a little clay and water, which makes a Fire Mortar to lay the wall; therefore no loss—under strong heat it freezes into a solid wall.

We also grind this Mica Schist Rock, for making Fire Brick, Fire Sand, Furnace Bottom Sand, &c.

J. W. PAXSON CO., PHILADELPHIA, PA.

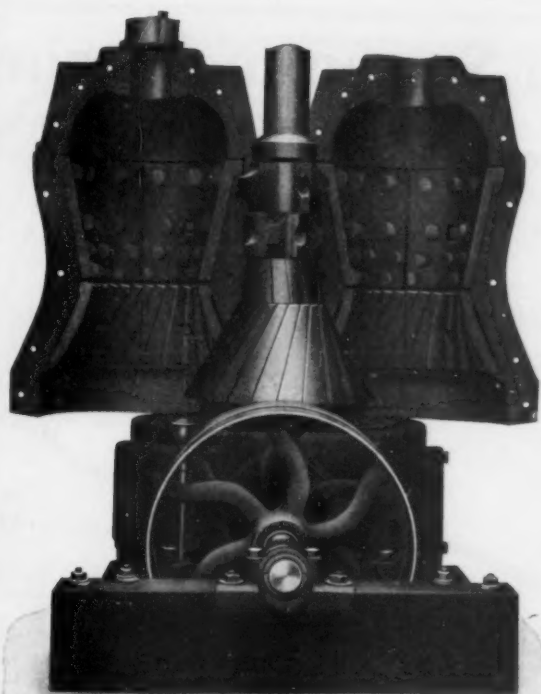
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OPEN DOOR Rotary Fine Crushers



We make a Specialty of

Fine Crushing



Crush to $\frac{1}{4}$ Inch.

No Screens—No other size.

Capacities from 1 to 30 tons per hour.

Can also crush coarse if desired.

These are the only machines which can crush large pieces of rock fine without screening and returning a large part of the output for re-crushing.

Open Door.

The open door construction has important advantages found in no other machine. By simply throwing open the door, perfect access to the machine's interior is gained for replacing the wearing parts. The plates and liners may be renewed quickly and easily without dismantling or hoisting, even in the largest sizes.

Everything is within easy reach.

If sledges or bolts get into this machine it is only necessary to open the doors to remove them without causing troublesome delays.

Send for catalogue of Crushers, Rolls, Grinding Mills, Screens, etc.

STURTEVANT MILL COMPANY

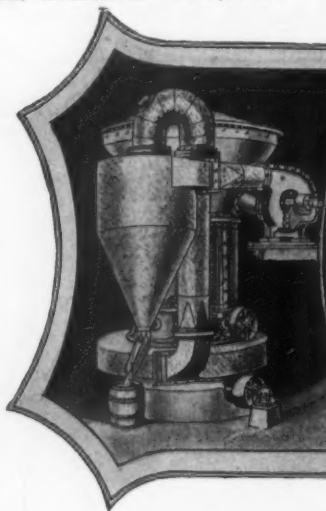
105 Clayton Street

BOSTON, MASS.

Tell 'em you saw it in ROCK PRODUCTS.

Give Us Time

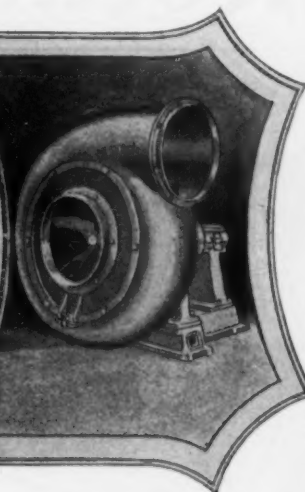
and we'll reverse the nebular hypothesis, by pulverizing the earth and the fullness thereof, whatever that means, to an impalpable star-dust. There's nothing that the Raymond Impact Mills won't pulverize from cornstalks and quartz to hallucinations and great mechanical "discoveries."

**Air Separation**

Screens and bolting cloth cost money. They are continually clogging and have been known to wear out. Air is free, won't clog, can't wear out, and, in our machines, the same air is used over and over again so often that it "gets the habit."

**Raymond Mills**

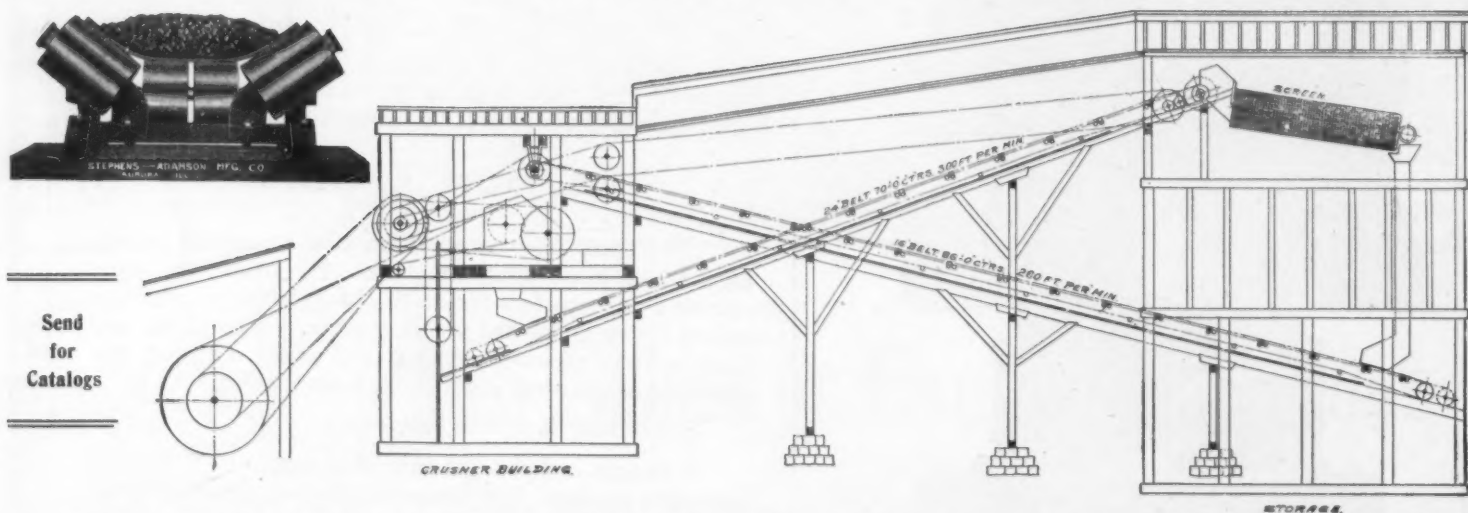
depend on two stubborn mechanical laws—gravity and centrifugal force. Gravity feeds the material and the flexible, but irresistible, centrifugal impact of suspended rollers reduces it to powder. There's no getting away from those two forces as applied here. Hence, no tailings.

**Their Dustlessness**

Makes "dust" for you. It is the fine powder and not the coarse stuff that wears out a pulverizer and kills off the men. Our Vacuum System keeps the dust out of both kinds of mischief. Send for catalogue. No nonsense about it.

Raymond Bros. Impact Pulverizer Co.,
143 Laflin Street, CHICAGO.

From Crusher to Screen, From Screen to Crusher



Showing a system of S-A BELT CONVEYORS installed for the American Lime and Stone Company of Pennsylvania, one of the largest concerns in the country engaged in the manufacture of crushed stone, lime, etc. In this plant one large crusher and one of smaller capacity are located in the crusher building. From the large crusher the stone is delivered to an S-A BELT CONVEYOR, 24 inches wide, running to the screen in the Storage Building. The crushed stone delivered from the screen drops into the bins and the large pieces that do not go through the perforations are carried over the end of the screen, dropped through a spout, then on a 16-inch S-A BELT CONVEYOR which carries it back to the small crusher, which also discharges to the 24-inch Conveyor.

We Design and Manufacture Conveyors for Handling

Stone, Sand, Gravel, Clay, Ores, Coal, &c.

MANY OF THE LARGEST PLANTS IN THE COUNTRY ARE EQUIPPED WITH OUR MACHINERY.

Stephens-Adamson Manufacturing Co.

Chicago Office: First National Bank Building.

Main Office and Works: AURORA, ILL.

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Expanded Steel for Reinforcement of Concrete

CHEAPER THAN OTHER FORMS OF CONCRETE CONSTRUCTION. LIGHTER - MORE DURABLE - MORE EASILY PUT IN PLACE

SUITABLE FOR

Foundations, Piers, Sewers,
Bridges, Subways,
Reservoirs, Flumes, Tunnels, Vaults,
Conduits, Tanks, Cisterns,
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Coal Bunkers,

Dry Docks, Power Plants,
Warehouses,
Naval Storehouses, Factories,
Sidewalks, Deck Houses,
Floors,
Roofs, Domes, Etc.

Full size detail $2\frac{3}{4}$ inch
Mesh No. 10 Gauge, Size
 $5\frac{1}{2} \times 2\frac{3}{4}$ inches inside; Sectional Area .323 Sheets 8 feet long, up to 6 feet wide; weight 1 lb. per square foot.

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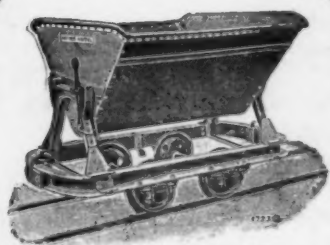
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STEEL PLASTERING LATH

Strongest, Stiffest,
Fireproof

Expanded Steel for Window and Skylight Guards, Etc. Dandy Indestructible Waste Basket, Fencing and Gates, Office and Elevator Enclosures, Tree Boxes, Railings, Expanded Steel Specialties of all kinds.

NORTHWESTERN EXPANDED METAL CO., 790 Old Colony Building CHICAGO



STANDARD STEEL DUMP CAR
DUMPING TO BOTH SIDES.

INDUSTRIAL RAILWAY EQUIPMENTS
ARTHUR KOPPEL COMPANY

We are Manufacturers of

Narrow Gauge Railway Materials

OF EVERY DESCRIPTION.

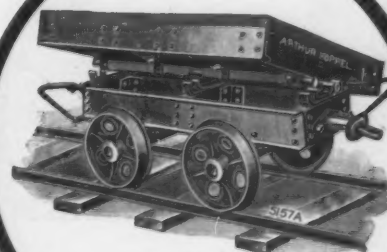
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WE CARRY IN STOCK:

Rails, Steel Ties, Portable Track, Permanent and Portable Switches, Crossings, Turntables, Wheels and Axles, and a Large Stock of Standard Types of Wooden and Steel Dump and Flat Cars.



SECTION OF PORTABLE TRACK.



PLATFORM CAR
DUMPING TO BOTH SIDES OR AT ONE END.

DEPT. R.

66-68 Broad Street,

New York.

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Chicago, Ill.

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The Federal Clay Product Company,

MINERAL CITY, OHIO.

Manufacturers of **FIRE BRICK** For All Purposes

FIRE BRICK, FIRE BRICK and FIRE CLAY are everlastingly our Specialty. Do you need anything in this line? If so, let us know your wants; let us figure with you. We can save you many dollars. WRITE US.

Hand Made ——— Hard Burnt
FIRE BRICK

— are the best for —
Lime and Cement Kilns

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HIGH GRADE

FIRE BRICK

For Cement Works, Lime Kilns, Cupolas, Steel and
Iron Works of every description :: :: :: ::

Louisville Fire Brick Works, K. B. GRAHN, Prop.,
Highland Park, Ky. P.O.



"LILY" LIME 99.77 PURE
ROGERS WHITE LIME CO.,

ROGERS, ARKANSAS

HENRY S. SPACKMAN ENGINEERING CO.

Official Chemists, National Association of Manufacturers of Sand Lime Brick.

HENRY S. SPACKMAN, Pres. Dr. E. W. LAZELL, Vice Pres.
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Lime and Sand-Lime-Brick plants designed, constructed and
superintended. Established plants examined and improved.
Properties investigated and Physical and Chemical reports
made. Chemical and Physical reports of all building material
a specialty.

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Rock Products

at \$2.00 a year.

A mighty good investment for you.

CONCRETE, ASPHALT PAVING, ROOFING

GRANITOID
PAVING

Ransome System, Reinforced Concrete

Factories, Grain Elevators, Silos, etc.

Mastic Asphalt Paving

Breweries, Warehouses, Cold Storage Plants

COMBINED CURB
AND GUTTER

COMPOSITION ROOFING

Asphalt, Pitch and Gravel Roofing

Ready Roofing and Building Papers

ROOF AND METAL PAINTS

SOUTHERN ROOFING AND PAVING COMPANY, Inc.

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ROTARY DRYERS

WE MAKE THE LARGEST VARIETY IN THE WORLD
More than 200 now in use. Gold Medal at St Louis
NOW USED IN THE GOV. COAL TESTING PLANT
THE C.O. BARTLETT & SNOW CO. CLEVELAND OHIO USA

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Secured promptly and with special regard to
the legal protection of the invention. Ad-
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Value Free. Write for Inventor's Hand Book.

SHEPHERD & PARKER

Patent Lawyers

"During the past ten years Mr. Shepherd,
of Shepherd & Parker, has obtained for us
a great many important patents. We have
no hesitation in heartily recommending
him to anyone having need of the services
of a patent attorney."
HALLWOOD CASH REGISTER CO.

Mr. Parker on November 1, 1903, resigned
his position as an Examiner in the U. S.
Patent Office to enter this firm.

Address,

146 Dietz Building, Washington, D. C.

Tell 'em you saw it in ROCK PRODUCTS.

GRAVITY

The Only Absolutely Free.
Unlimited. Uniform Power!

The Mathews Gravity Carrier

HARNESSES

This wonderful force and

Cuts Your Bills In Two

The Simplest
Most Practical
Less Expensive

Method of Loading or Conveying

BUILDING BLOCKS
TILING, SEWER PIPES
ALL KINDS OF BRICK
CEMENT IN SACKS

Will convey material down grade, on a level, up
an incline and around all kinds of curves.



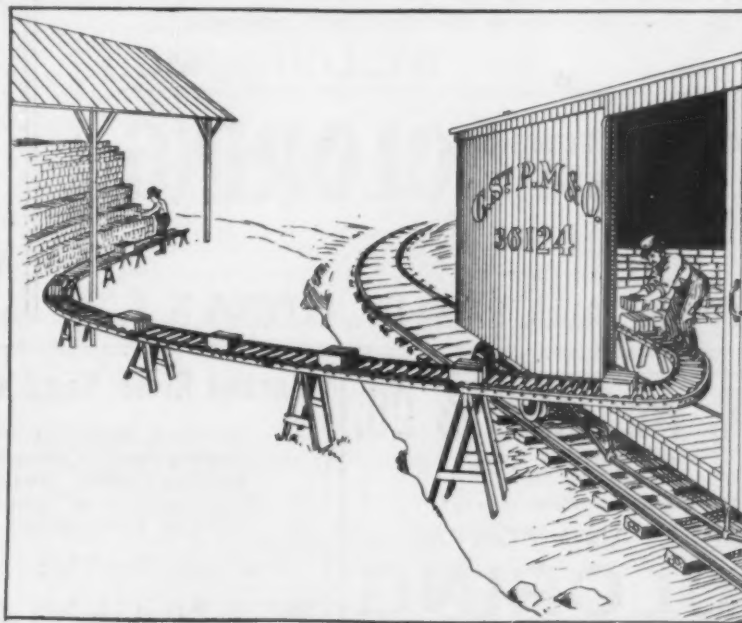
THE OLD WAY

A BOON TO CEMENT USERS!

The accompanying cuts show by comparison the relative methods of loading brick by the old method with wheelbarrows, and the later and better method of our Gravity Carriers.

While the personal appearance of the gentlemen manipulating the wheelbarrows in the "old way" may be slightly exaggerated, in the "new way" is given a correct representation of a car being loaded with loose brick from the kiln about 150 feet away—the two pictures preach their own sermon—in the new way all useless traveling, unnecessary labor and waste of time is eliminated. Blocks and everything else can be as easily handled.

WRITE US TO-DAY!



THE NEW WAY

Mention That You Saw Our "Ad" in Rock Products

MATHEWS GRAVITY CARRIER CO.,
Cor. Hampden and Wabash Aves. ST. PAUL, MINN.

RUGGLES - COLES
DRYERS
 RUGGLES-COLES ENGINEERING CO.
 NEW YORK CHICAGO



Mr. Cement Man—

Don't you like to be up-to-date when it means economy? Certainly! Yet you are still using that old obsolete cast tooth gear. The logical solution of this question is Nuttall Cut or Planed Gears.

Write for proposition.

R. D. Nuttall Co.

500 Duquesne Way,
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Ashland Fire Brick Co.

ASHLAND, KENTUCKY.

We operate five plants, one of them devoted to Brick for Cement and Lime Kilns. Our "Ironton Crown Liners" are known and used by cement makers the world over. Ask us why. "Folder A."

OZARK COOPERAGE CO.

MANUFACTURERS OF

Lime, Cement and Salt Cooperage Stock.

We are specialists and can supply your wants promptly.

Frisco Building, **ST. LOUIS, MO.**

BRICK and MORTAR COLORING

After twenty years "CLINTON" colors still stand at the head. Get the genuine, with the "Little Yellow Side-Label."

CORRESPONDENCE SOLICITED.

CLINTON METALLIC PAINT CO., CLINTON, N. Y.

The Single Stave Barrel Co.

GENERAL OFFICE: 812-818 Rockefeller Building, CLEVELAND, O.
FACTORY: MALDEN, MO.

Manufacturers of a superior package assembled or knocked down. For Lime, Cement, Salt, etc. Easily assembled. Especially strong and tight.

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C. K. WILLIAMS & CO.
EASTON, PA.

The Largest Manufacturers in the U. S.

BRICK AND MORTAR COLORING
OF ALL SHADES.

Correspondence Solicited. Samples and Estimates cheerfully furnished on application.

S. W. SHOOP & CO.
ALTOONA, PA. PENNSYLVANIA.

Designers and Builders of the SHOOP IMPROVED PATENT LIME KILNS. Designing and Installing a Specialty.

Washed River Sand and Gravel.

Building, Moulding and Stone
Sawing Sands, Concrete Gravel,
Roofing Gravel, Road Gravel.
Car lots, boat loads. All
railroad connections.

Towing: Towboat "Nugent."

W. F. NUGENT & BROS.
LONG DISTANCE PHONES 1475 and 527 MAIN.

243 Fifth Street, LOUISVILLE, KY.

THE CAPPON PROCESS
(CALCIUM CHLORIDE SYSTEM)
FOR MAKING

Hard Plaster, Artificial Stone and Marble, Etc.

Without the use of gypsum, is of
interest to all lime manufacturers

THOMAS W. CAPPON, Patentee,
No. 881 E. 141 Street, NEW YORK.

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MILWAUKEE BAG CO.

MILWAUKEE, WIS.

**HIGH GRADE PRINTERS
& MANUFACTURERS OF**

**DUCK,
OSNABURG
AND JUTE
CEMENT BAGS.**

DEALERS IN
PAPER BAGS & TWINES.
WRITE FOR PRICES & SAMPLES.





Entered as second-class matter December 16, 1905, at the Post Office at Louisville, Ky., under Act of Congress of March 3, 1879.

THE FRANCIS PUBLISHING COMPANY,
Publishers.

E. H. DEFEBAGH President.

A semi-monthly trade journal devoted to the interests of the manufacturers and dealers in rock products and kindred lines, including Lime, Cement, Salt, Sand, Slate, Granite, Marble, Sandstone, Grindstones, Artificial Stone, Emery Stone, Quarries, Monuments, Manganese, Asphalt, Phosphates, Plaster, Terra Cotta, Roofing and Roofing Tile, Coal, Oil, Mineral Wool, Brick, etc.

EDITORS.

E. H. DEFEBAGH. FRED K. IRVINE.

ASSOCIATE EDITORS.

HENRY C. WHITAKER Barre, Vt.

ALEX. CRISTADORO New York.
Regular Staff Correspondents in the Principal Centers.

The mission of ROCK PRODUCTS is to serve the trade in any and every honorable way possible, to promote better profits and make life more pleasant for those engaged in the business to which it caters. With this end in view, criticism is courted, and all are invited to use its columns to further ideas and suggestions for the good of the trade. The office, too, is at the service of the constituents of this paper; so when you want to buy or sell, or merely ask a question, write, and when you are in town, call and make it your headquarters.

"TELL 'EM YOU SAW IT IN ROCK PRODUCTS."

♦♦ No contracts will be accepted with advertising agencies, as our system for promoting the interests of patrons requires direct co-operation.

♦♦ Matter for publication to insure insertion in any given number must reach this office at least ten days preceding the date of the paper. This measure is made necessary by the rapid growth of circulation, taking more time in the printing department.

SUBSCRIPTION RATES, \$2.00 per annum, postpaid anywhere in the United States, Canada or Mexico; \$3.00 elsewhere in the Postal Union. Single copies, 10 cents.

ADVERTISING RATES will be furnished on application.

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BRANCHES:

NEW YORK OFFICE—Room 502, 136 Liberty Street.

CHICAGO OFFICE—Room 1312, Tribune Building.

NEW ENGLAND OFFICE—16 Merchant St., Barre, Vt.

LOUISVILLE, KY., FEB. 22, 1906.

Art Department Free to Advertisers.

No person who spends money for publicity should be deceived by the large promises and sweeping offers made by so-called advertising agencies to secure business. The only tool of their trade, and their entire investment in most cases consists of cheap talk. They are insufficiently informed upon matters concerning the intimate requirements of the industry which we represent and they are totally unqualified to deliver the goods. They boast of preparation and study, and these consist chiefly in arbitrary and impractical technicalities which can produce neither lasting effectiveness nor profit. They always, in a measure, defeat the prime purposes of publicity which can never succeed upon any other basis than a consistent and intimate relationship between the publisher and the advertiser. We are unwilling that any patron of Rock Products shall be curtailed by such parties from any of the benefits of our matchless organization for securing direct profits from publicity. With great care and large expense we have established a Design and Art Department, in keeping with our progressive policy, which is offered free for the use of all our patrons.

All the benefits of the highest development of modern methods and the most approved rules for display and design are provided in this department, working in conjunction with constant advice from our enormous correspondence as to the intimate requirements of the trade. A complete engraving establishment has been secured, capable artists employed and this efficient organization, based upon the careful study of well advised experts.

There are many concerns with faked-up equipment who merely prepare copy and take large profits to themselves from the advertising business. It costs us much money to obtain our Design and Art Department, but we cheerfully invite every advertising patron to participate in its benefits, because we desire to co-operate actively and directly in the promotion of your business without the interference and big charges of disinterested outsiders. That is why we have provided such a department.

We consider our advertising pages as constituting a powerful compendium of information, with far reaching influence and of practical value to a very large number of people throughout the country. In offering the services of this new department to our advertisers, we do it with the full knowledge of the fact that our own establishment stands better advised and in more intimate touch with possible buyers of machinery or materials advertised than is in any way possible for the would-be agent, who is all unprepared, untutored and irresponsible, and the performance of whose promises must absolutely depend upon the abilities and organization of the publishers who conduct an extensive establishment representing enormous investments. In every case where their trivial services may apparently produce profit, it is never really creditable to the actual merit of their work. They merely feed upon the impatience of busy men like parasites upon the pulse of prosperity.

For Sand-Cement Brickmakers.

A great deal of attention is latterly being devoted to the manufacture of sand cement brick. Several bright minds, in different parts of the country, seem to have been working at the same time for the purpose of producing a sample hand tamp machine to profitably manufacture this material now in its infancy.

ROCK PRODUCTS has to say that as a result of our own research and inquiry, we can recommend that every sand-cement brick should be made from clean, dry sand and cement, in the proportion of about four and one-half of sand to one of cement, and to this add about 4 per cent of hydrated lime. Of such a mixture, the brick can be successfully molded upon any of the machines that are now offered, and in every case they should be placed in a wet-steaming chamber, which can be cheaply constructed of the bricks themselves and connected with the boiler by means of a pipe discharging into the tight chamber so constructed. Bricks so seasoned and made from such a mixture will be much more nearly water-proof than those made in any other manner. They will have a greater crushing strength, a higher tensile strength and will stand a greater transverse strain. As a fire-proof material such a brick should be somewhere near the ideal.

PARTIES interested in the development of the concrete industry should bear in mind that our concrete edition, beginning with January 22, and in the paper dated the 22nd of each month thereafter, will appear the chief papers of merit presented before the various cement users' conventions of the country. These papers should be preserved for future reference, as the papers referred to contain the most valuable matter that is being considered by the leading lights and practical men who are in the front rank of mighty progress.

THE wonderful progress of the concrete industry in the year 1905, the record of which is just being completed, is the best promise of the measure of expansion that will be accomplished in 1906. More men and greater intelligence are going into the industry every day.

Look Well to the Sand.

NEXT to cement sand is the all important material in the concrete mixture, and from present indications and the apparent diversity of opinions it looks like we have really only begun the proper education upon this important subject. Sand is found almost everywhere, and yet out of one hundred samples from different localities, we have that many entirely different materials, all called "sand," and each of them would very probably have a different value in the concrete mixture. This is one of the causes of the wide disparagement in results obtained in different localities. Some bright engineers have taken up the matter of producing sand in an artificial way by pulverizing clean sandstone, and thus producing a material more nearly fitted to the requirements for manufacturing concrete commodities where a fine texture is imperative in the finished product. Almost any approximately clean sand, with cement and water, will make a concrete stone where appearances are not to be taken into consideration, but where the highest results are desired, the sand is a factor which must be taken into consideration. Probably more disappointments have been caused by lack of attention to the sand employed in the concrete mixture than for any other reason.

Benefits of Education.

THE result of all the education of the concrete conventions has been to encourage the men who have been in the business to improve their product by the use of well approved mixing machines and additional equipment to get the plants down to a factory basis where a standard product can be continuously produced, and a stock of marketable building material accumulated, for sales can not be made of goods that are not manufactured.

The order-before-you-make-them-system will gradually disappear when concrete commodities are manufactured upon a factory basis—where cement is purchased by the carload and the men are kept continuously doing the same work over and over so as to become expert in the various divisions of the work. The idea that once prevailed that concrete stone could be profitably manufactured with the investment of very little capital and practically no attention beyond the collection of large bills for completed work has almost disappeared. Those who have made a success of the business realize that profits are only to be obtained by the investment of sufficient capital to conduct a manufacturing business, and with the employment of skilled labor working under a careful organization to prevent waste of materials, and a rigid observance of the processes necessary to complete the stone in a uniformly standard manner.

The get-rich-quick-idea has been eliminated and the conviction established that with intelligent and diligent work, with carefully conserved capital, that there is a good profit in the manufacture of concrete commodities; and each manufacturer must realize that in his own special locality he must study out the formulas by experimentation with the materials which he intends to actually use in his operations.

Coloring Artificial Stone.

THE papers and discussions offered before the recent convention of sand-lime brick manufacturers upon the subject of coloring their product by the introduction of coloring matter goes to show that satisfactory results in this line are not easily to be obtained. One point was forcibly brought out, which applies not only to the sand-lime brick but to every kind of artificial stone, to-wit: it is absolutely necessary to know exactly what are the chemical properties of every ingredient which enters into the mass, and to be in a position to absolutely control their uniformity wherever a uniform color is required.

From Our Own Correspondents.

GREATER NEW YORK.

NEW YORK, N. Y., February 20.—Capt. John L. Young and associates have had plans drawn for a \$225,000.00 hotel at Arkansas Avenue and the beach, Atlantic City, N. J. The structure will be magnificent in its outlines, and will correspond with the style of architecture to be used in the construction of the new million dollar concrete pier to extend into the ocean directly in front of the hotel. It is to be six stories in height and constructed of reinforced concrete and fire proof material throughout.

Unique Cement House in Brooklyn.

There is a skyscraper, ten stories high above the foundations near Catherine Ferry in Brooklyn, that is said to be the largest of its kind in the East. It is built entirely of cement—walls, floors, ceilings and all—and there is not a stick of wood used in the construction above the first floor. Its form of construction was so simple and novel that the labor unions had a hot debate about it. Wherever a wall was to be built a skeleton of steel wire was strung and around this a trough or casing of wood was built. The trough was then filled with cement which was allowed to harden and the wall was begun. Then the trough was raised and the same operation repeated made the wall grow in height. The wires in the center, it was explained, gave solidity to the construction.

Big Smelting Works Projected.

The Guggenheims and Rockefellers, through their recently formed American Smelters' Securities Co., have decided to build a \$3,500,000.00 smelter at a point a mile back from Port Cost, Col., and ground will be broken for the big establishment early next summer.

Calls for Civil Engineers and Steel Inspectors.

The outlook in New York for the consumption of concrete on all the new tunnels, rapid transit routes and connections therewith, is something unprecedented, almost beyond calculation. Stone, naturally is holding its own for exterior work, but wherever concrete can, with regard to outward appearances, be selected it is being so used. A corresponding demand is on foot for every form of steel construction, which is exemplified by the fact that the city is calling for candidates to present themselves for examination for positions in these two fields, civil engineers and steel inspectors being urgently called for.

\$6,250,000.00 Net for Lot.

New York is soon to have another immense building to be erected at the northeast corner of Broadway and Thirty-third Street, where a 25-story office building is to be erected. It will cost \$1,500,000.00 and, as planned, will be a striking ornament to Herald Square. It will stand directly opposite the McAdoo terminal site and will be completed in five years. The lot was rented, exclusive of taxes, for \$50,000.00 a year for the first five years, and \$60,000.00 a year for the next 100 years.

On General Market Conditions.

At the office of the John P. Kane Co., 287 Fourth Avenue, they were busier than usual and there seemed to be no let up to it. They had the biggest January business ever known. The John P. Kane Co. make the Trowell Brand of cement at their works, Smith's Landing, on the Hudson river, and bring it here in boats. Just before the recent cold snap they were quite fortunate to get down 6,000 barrels which carried them along without delaying any of the works which they supply. But they do not depend upon their own brand alone, they supply all kinds. This was the firm who supplied the 1,000,000 barrels of Glant cement for the rapid transit tunnel. The price of cement remains firm, but may advance slightly. Brick, which is quite a feature with this firm, is in great demand, and is scarce and high, which indicates a brisk spring opening at the yards.

A fact not generally known in the trade is that last year this firm furnished to the New York Public Library, at Forty-second Street and Fifth Ave., alone 25,000,000 common brick. Last year this firm handled 180,000 barrels of Atlas cement and have already furnished 50,000 barrels of cement to the New York Public Library.

Preparing for a Good Spring Business.

Mr. Pfotenbauer, of Pfotenbauer & Nesbit, 1133 Broadway, says they have been making brick steadily right through the winter at their works, and are now well prepared for the spring opening. They are receiving numerous inquiries and are satisfied with the outlook. Mr. Pfotenbauer thinks there will be more building operations on a larger scale in the business section down town this year than last, and not so much in the upper section of the city on speculation as heretofore.

The Brick Situation.

At the office of John C. McNamara, foot of West Fifty-second Street, Mr. McNamara stated that the brick business was very satisfactory indeed. Brick is now selling for \$11.00 and covered brick \$12.00. This is an advance of about \$3.00 per 1,000 over the price asked last fall. Mr. McNamara handles only the brick from the Hudson river and New Jersey yards.

The labor troubles in some of the buildings in course of construction has a deterring effect, but taking it all in all, the brick business for the coming year promises to eclipse any season in recent years.

The Kohl-Hepp Brick Co.

The Kohl-Hepp Brick Co. has been incorporated under the laws of the State of New York, with a capital of \$100,000.00. Their works are located at South River, N. J., where they expect to equip the plant with the latest improved machinery, including steam shovels for excavating and cars for hauling the clay from the pits. They control 164 acres of land and their plant has a capacity of thirty million brick a season.

Clay Products in Texas.

On the San Antonio and Aransas Pass railroad, at Lena, Texas, a New York syndicate is establishing a modern plant for the manufacture of paving brick, electrical conduits and hollow and enameled bricks. The property is owned by the Atlantic Effrosite Co., a New Jersey corporation, and several clay working industries shortly will be set up not far from the works of the Effrosite Co., there being based on the large supply of white clays, kaolins and high grade refractory shales from its own mines. The kaolins are white burning, and flint and spar are taken from mines under control of the Effrosite company.

A Million Dollar Asbestos Co.

Prominent New York capitalists are said to be interested in a big enterprise near Casper, Wyo., through E. H. French, who has recently come to New York to complete the organization of a \$1,000,000.00 company to exploit the extensive asbestos deposits on Smith Creek near Casper.

Good Year for Cement.

Mr. Leonard, of the Lawrence Cement Co., No. 1 Broadway, reports their business as satisfactory; they find a ready market for all they can turn out, especially their Portland. Rosendale is still holding its own, however, and the indications are that there will be a waiting market for all the cement manufactured during the coming year, with perhaps a slight advance in price.

Cement Company to be Sold Out.

News comes under date of February 20, from Easton, Pa., that the Knickerbocker Trust Co., of New York, as trustee, has issued an execution for \$183,781.63, against the property of the Quaker Portland Cement Co., at Martins Creek. The sheriff will sell the property in March.

Mr. Albert Mayer, manager of the sales department of the Vulcanite Portland Cement Co., Fuller building, Twenty-third Street and Broadway, is taking a much needed vacation. Mr. Mayer has gone to Bermuda and will return here about March 1.

Good Outlook for Cement.

At the office of the Vulcanite Portland Cement Co., in the Fuller building, they report business as better than usual at this season of the year. Builders and contractors are now ready to make contracts for their material for the year, but the companies are not anxious, however, as they can see a ready market ahead for their entire output, and are very apt to hold off till May 1, at which

time they expect an increased demand, and perhaps a better price than now prevails.

May Enlarge the Plant.

Mr. J. Maxwell Carrre, No. 1 Madison Avenue, reports his business as very satisfactory, his cement being a very fine color and stainless, it is in great demand for interior and high class work. Mr. Carrre is watching the building and construction operations planned for future development with a great deal of interest, and is seriously considering the advisability of enlarging the capacity of his plant which is now getting too small for his rapidly growing business.

Burned to a Crisp in a Lime Kiln.

A company in Newark, N. J., makes lime from oyster and clam shells. As much as two big wagon loads of shells at a time are piled on a coke fire and burned and then treated. The top of the pile is pleasantly warm on a cold night and some boys are accustomed to burrow in it and spend the night there. Two of them were missed from their homes for some days and the pile was overhauled and their burned remains were found in the bed of coke. It is presumed that they were overcome by gas, and when enough of the pile was burned away to make the crust at the top thin enough they fell through.

Economizing on Their Stock of Stone.

At the office of Clifford L. Miller & Co., 125 E. 23rd Street, they report business fair for the winter months with good prices for everything. They are not doing much as yet with their new process for making lime from oyster shells, however, as that is not the principal feature of their business. Mr. Miller stated that they were not anxious for too much business just now until rock begins to come in again freely from Nova Scotia. Navigation is expected to open up this year earlier than ever before and they do not want to exhaust the rock they now have on hand before any new stock arrives.

Plaster Generally Improving.

At the Wotherspoon Plaster Mills, 1170 Broadway, they report business very good for February, and the price of plaster is high now, and is expected to go higher. There is a great demand for brown and lath mortar and also for superfine for terra cotta and interior furnishing, and the demand also seems to be in good demand. As they receive nearly all their gypsum from Nova Scotia, navigation being closed for the winter, they have been obliged to go slow on orders so as not to use up all they have on hand at their mills in Ravenswood, L. I. City, but they have a boat load ordered as soon as it can come through. The prospects are favorable for a good season the coming year, but the export market remains very inactive.

New Plaster Mills Going Up.

J. B. King, 1 Broadway, reports business as better now than last year. They are turning out 750 tons of calcined plaster a day and are obliged to increase their plant and by the first of April will be turning out 1,000 tons. They have under erection a five-story fire proof reinforced steel construction building, 200x150, at New Brighton, L. I., and in addition to that plans have been drawn for a mill at Newark, N. J., that will make 100 tons an hour. The Turner Construction Co., of 11 Broadway, will build both buildings. J. B. King is the pioneer of hard plaster manufacturers, their brand being King's Windsor cement. They have contracted for two large steel tugs 1,500 horse power each and 165 feet in length, together with three steel barges with a carrying capacity of 5,000 tons a piece which will help to replace the loss of their tug Gypsum King, the largest tug on the coast, which was lost two weeks ago by running on a ledge in a fog off the Bay of Fundy, near Nova Scotia. J. B. King controls about 20,000 acres of Nova Scotia gypsum land, which, with the exception of a limited amount controlled by another concern, comprises all the available gypsum property there.

Mr. J. J. Curtin, of Rosendale, N. Y., father of Cornelius J. Curtin, the president of the Farnam-Cheshire Lime Co., of 29 Cortlandt Street, died at his home in that village on February 10. Mr. Curtin was one of the oldest and most highly respected citizens in Ulster County.

Improving and Enlarging Plant.

At the office of the Farnam-Cheshire Lime Co., Mr. Curtin stated that at the present time they are loaded down with orders for finishing lime, and have been obliged to double the capacity of their plant since last fall. The Bleichert tram, built by the Trenton Iron Co., of Trenton,

N. J., for conveying the rock from the quarry to the kilns, is being installed and will be ready by March 10. With this added improvement the plant will be one of the finest and best equipped in this country.

Gas Producers for Big Philadelphia Plant.

Mr. Jeffries, of The Morgan Construction Co., at 40 Exchange Place, reports the sale of four of their gas producers to brick men since the brick convention. They also have had a great many inquiries from lime manufacturers, who have heard of the great advantages of their gas producer. The lime men who formerly burned wood now burn coal, and those who have installed the Morgan gas producer at their plant say they can make a barrel of lime at one-half the former cost of production, besides drawing from the kiln an average of eighty-five barrels against a former output of fifty-five barrels.

As an evidence of the growing importance of the producer gas system and its adoption by large industries and firms, Mr. Jeffries states that they are at present estimating on \$1,500,000.00 worth of work which will be embraced by only six plants, the larger the concerns are and the greater the amount of money they have invested in other methods the quicker they are to throw aside these latter and refit the plant regardless of expense with the producer gas system; for the results are so quick and evident that but little calculation is required to see the great profit that will come from such advanced change from old methods. Along this line is some work now pending with a large Philadelphia concern which calls respectively for 50 and 28 machines in its two plants.

American System Preferred to German.

Professor Bliss, of the Avram-Leet Engineering Co., 150 Nassau Street, reports their business is better now than ever before. Their Rochester plant is running at full blast and they are finding a ready market for their output. They expect to turn out 2,000,000 brick by the first of April. They are busy now arranging to build another plant at Indianapolis, Ind., and will also start one under an operating company soon in this locality. The Professor also said that owing to some companies who had neither the right kind of sand or the right kind of lime, to say nothing of their process, not being able to produce a sand-lime brick that came up to the mark, and consequently a failure, he found it hard to convince the more prominent architects that they had succeeded in making a brick that would stand any kind of a test.

You can not make sand-lime brick out of all kinds of sand or lime. The important thing in sand and lime is silica which is most necessary in order to make a good brick. A great many plants fail for this very reason and for the time being give the business a black eye. The Professor further stated that they have had inquiries from outside the United States from a prominent concern who have been using German machinery and were not satisfied, and are anxious to install their system instead.

Mr. Lynn T. Leet, of the Avram-Leet Engineering Co., who has been in California on a business trip, has succeeded in locating a site and getting his people together preparatory to putting in their system and making sand-lime brick on the Pacific Coast.

Sand-Lime Brick Making Good Headway.

Mr. E. A. Westerfield, in charge of the sand-lime brick end of the American Sand-Lime Brick Co.'s business, reports their trade as being in first class condition, with inquiries coming in from every direction. They are now negotiating with parties in Scotland, Havana and Caracas, Venezuela, for the erection of their sand-lime brick plants. So far this month they have shipped an entire equipment to New Zealand. At the present time they have six plants organized with capital either subscribed for or in process of organization, here in the vicinity of New York City, to use their system. Their business has increased to such an extent that they find they must have more room, and their present office being inadequate they have secured two more adjoining offices on the same floor which they are now fitting up.

Mr. Westerfield says that Mr. Collins, superintendent of buildings in the Borough of Brooklyn, is of the opinion that sand-lime brick will supercede clay brick entirely before long. Their company has other orders for a great deal of machinery, and with their capacity for supplying it, the outlook is very promising for the sand-lime brick business this year.

Receiver for H. Hunnekes Co.

Judge Holt, of the U. S. District Court, has appointed Lindsay Russell receiver in bankruptcy of

the assets of H. Hunnekes Co., engineers and contractors, 114 Liberty Street, this city, and Toledo, Ohio, and fixed his bond at \$25,000.00. The assets are bills receivable, \$9,000.00; accounts receivable, machinery and contracts, \$103,000.00, against which there are counter claims for a large amount, leaving an equity of probably \$50,000.00, office furniture \$1,000.00, cash in bank \$500.00. Litigation is pending as to the amount of money due the company, which money has been attached by the Hummelstown (Pa.) Brown Stone Co. Louis Kuriatowski was the president of the company and David W. Cummings owns 87½ per cent of the capital stock of the company. Creditors estimate the actual assets at about \$20,000.00.

Visiting in New York.

John J. Moroney, general manager of the American Sand-Lime Brick Co., at Chicago, was a visitor here last week.

W. N. Durbin, president, and Col. W. C. Vanneman, vice president, of the American Sand-Lime Brick Co., of Anderson, Ind., were in New York last week on a tour of inspection.

Brooklyn Building Department Up-To-Date.

Mr. Arlington D. Isham, of 132 Nassau Street, says that the hollow block business is keeping up throughout the winter months. He has just drawn the preliminary plans for two new hollow block houses to be erected immediately, and there is no question about their going through. Mr. Isham also informs us that the Brooklyn building department hereafter will use concrete the same thickness as brick. He expects a bigger building boom this year than last on account of the numerous public improvements in every direction.

Finishing a Satisfactory Season.

At the Concrete Building Block Co.'s office, 45 Clinton Street, Newark, N. J., Mr. Hill reported the close of the season was very satisfactory, partly as to the amount of work done by them, and more so as to quality of it and the interest created among desirable investors and builders. Their work has been in competition with the very best grade of brick and stone construction. At present they are engaged on considerable cellar and foundation work, necessitating a competition with a cheaper grade of brick and stone construction, but they allow no deterioration in the quality of their work, it all going to the good of the trade and helping to make it more known and paying the way for more of the higher grade work.

Receiver for Fireproofing Concern.

On February 14 a temporary receiver was appointed for the property of the Scaglioline Brick and Fireproofing Co., manufacturers of fireproofing material, on application of Ernest May and others, for a voluntary dissolution of the corporation. The company was incorporated in 1905, with a capital stock of \$100,000.00.

American Dryers for Japan.

At the office of the U. S. Drying Engineering Co., 66 Beaver Street, Mr. Carritte reports the shipment of their second plant to the phosphate fields of Japan, also a phosphate dryer to Tennessee, and three sand dryers to other sections of the central West. They are now building a copper ore dryer for the Lake Superior district, and another machine for drying gypsum for a concern in Michigan. Mr. Carritte has just returned from a business trip to Chicago, Grand Rapids, Fort Wayne and Detroit, and reports business prospects as very bright.

To Equip Mills on Pacific Coast.

At the office of the J. R. Alsing Co., 136 Liberty Street, Mr. Abbe reports the shipment of three carloads of machines to the Pacific Coast, to equip two large cement mills now in the course of erection. They state that the flint pebbles used in their pulverizers are of a superior quality which came from Belgium and Denmark, and are sent by vessels around the Horn to the Pacific Coast. Mr. Abbe further stated that the business outlook for 1906 for their machinery was very promising.

Salt Company to Enlarge Its Plant.

It is announced that the Pennsylvania Salt Manufacturing Co., which has between \$2,000,000.00 and \$3,000,000.00 invested in its Wyandotte, Mich., plant, will soon add buildings and equipment, calling for an expenditure of \$1,000,000.00 or more.

F. L. Smith & Co., engineers and designers of cement plants, report the sale of fifty-two mills during the winter months. They state they are receiving a great many inquiries, and while they do not all develop results, so far have been satis-

factory, and business has kept up well since the early part of last fall. The machines they have sold have been to the larger companies, who being established for years, have been using other machines for some time. The fact that they are now using their machines proves what they state, they having maintained all along that for efficiency and economy, even though higher in price than some other machines, they pay better in the long run consequently there must be some merit in their machines not found in others. The bulk of this company's business is generally in the latter part of each year, this new year proving the exception as they are as busy now as last fall.

This company have just gotten out a very interesting calendar, being a replica of one of J. G. Brown's inimitable studies of child life, entitled, "Watching the Parade." There are a few more left for those who speak quickly.

Road Machinery Wanted in South America.

Consul Ruffin, of Assuncion, sends a report on the spread of automobilism in Paraguay, to such an extent that it has induced the Paraguayan Congress to establish a public road commission to build new highways and improve all the existing ones, and as American roadmaking machinery is in favor down there the consul thinks there is a good chance for American manufacturers to make sales.

Their Dryers in Continued Demand.

Mr. Emerick, of the American Process Co., 62-64 William Street, reports the sale of two of their sand dryers this month so far, one being sent to Connecticut and one to Pennsylvania. Their business has been very satisfactory. They are receiving an increased number of inquiries from various sections which indicates that their driers are being widely sought after. The outlook is very bright for a big season for this company.

Mr. Emerick leaves for the West to close some pending orders in Chicago and vicinity.

Want More Room to Make Scales.

At the New York office of the Richardson Scale Co., in the Park Row building they report their business as so good that the factory which they opened last August at Paterson, N. J., has grown too small, and consequently they are obliged to break ground alongside of it for another factory the same size. It will cover about 12,000 square feet and is to be built of brick. The prospects for business so far this year are brighter than ever.

Ralph Peverley in a New Role.

Mr. Ralph Peverley's many friends will undoubtedly be very much interested in learning of his new venture. His restaurant is situated on Broadway diagonally opposite the big Ansonia. It was formerly the Tilden Club and was refurbished and redecorated by Mr. Peverley at considerable expense. The location is a very desirable one and with the big Aphrope Hotel to be the largest in New York, now going up right there, it bids fair to soon be the most populous and lively part of upper Broadway.

The big glass portico with its ponderous, yet graceful iron grille-work doors, affords an unrestricted view of the cheerful hallway entrance where Mr. Peverley is to be seen ceaselessly circulating up and down among his many guests. He is an excellent host and entertainer and looks most carefully to the comfort of his guest, and all his old friends who call on him will be assured of a right royal welcome.

Wood Waste for Lime Burning.

The Duluth plant of the Kelly Island Lime and Transport Co., like the balance of the Kelly Island lime plants, is a well constructed and well equipped plant, but differs from most of the others, in that wood only is burned. The limestone is shipped in from Kelly Island and Marblehead by boat, and stored at the plant to be used as needed. The stone is handled to the nine kilns by a vertical elevator arrangement, and wood is brought up on cars to the firing floor in the same manner. Since the kilns are located on the water front, space is an item. For this reason vertical elevators are used, when, if room was available, an incline would probably be used. The fuel used is waste slabs from mills and is soft wood. For this reason, the fireman is kept busy most all the time feeding his furnace. Next to the kilns come the heading up room, and just beyond this the stove mill and barrel factory supplies the barrels for the plants. The stove mill is in charge of Mr. L. G. King. D. W. Ridgewell is superintendent of the lime plant and Mr. D. G. Cutter, vice president, is general manager of the Kelly Island Lime and Transport Co. Mr. Cutter is also a very large dealer in builders' supplies.

SYRACUSE, N. Y.

SYRACUSE, N. Y., February 15.—The Warner-Quinlan Co. have bought from Lawrence B. Byrne, a quarry of fifty-seven acres on the south side of the Jamesville road, near this city. A complete stone crushing plant will be installed and the capacity will be 2,000 cubic yards of crushed stone a day. About \$25,000.00 will be spent in equipment.

Russell R. Stuart has been elected president and general manager of the Web Tile Sewer Co. The other officers chosen were vice president, John Mara; secretary and treasurer, J. Frank Plumb. The officers, with Charles E. Colton and Walter Welch comprise the board of directors.

John J. Costello, manager of the James Behan estate, which has extensive quarries at Manlius, about fifteen miles from Syracuse, was a recent visitor in town. The agents in this city for the estate are George W. Pack & Son, No. 415-417 East Water Street, and the products are water, lime hydraulic cement, crushed stone, building stone and land plaster. The quarries are located on the Chenango branch of the West Shore. The estate has 130 acres of limestone rock and gypsum is obtained from beds owned by the estate at Elkhorn near Manlius. It is at this same place that the National Wall Plaster Co., H. S. Lansing and Cortland Snook have gypsum beds which are being operated now. Mr. Costello said a large business was being carried on by crushing the rock and shipping it to various cement factories. He says the water lime business is good and he has been busy right up to the present time. Prices, he says, are so low that they can't get any lower. There is no demand in this section for quick lime, he says. He is shipping a large quantity of crushed stone to various towns to be used in road building.

William Church, of Central Square, who deals in building materials, has found a new use for quick lime. The farmers in this section use it as a fertilizer for corn and other crops, and he believes it is one of the best things they can put on their land. This is a suggestion for others to work up, a trade along this line.

C. J. Sullivan, of No. 909 North State Street, is going into the cement block business and is in the market for cement block machinery. He has a warehouse at the address named and will make the block there. Mr. Sullivan is the agent for Lehigh cement. One year ago he could buy cement in the New York market at 80 cents a barrel and now he has to pay \$1.15 at the mill. He expects a lot of building and paving next year. Mr. Sullivan will continue to do a big business laying sidewalks. Last year he laid from April 1 to November 1, 250,000 feet of sidewalk, having seven gangs at work all the season. Mr. Sullivan is furnishing \$20,000.00 worth of sewer pipe to the city, being agent for the New York State Sewer Pipe Co., of Rochester, N. Y. The Shawmut paving block, which he handles, has just been specified by the city engineer on the city paving jobs, giving Mr. Sullivan a chance to get in. Considerable of this block has already been laid and has given excellent satisfaction.

The Paragon Plaster Co. has elected the following officers for the ensuing year: President, Jacob Amos; vice president, A. E. Nettleton; treasurer and manager, W. K. Squier; directors, Jacob Amos, A. E. Nettleton, W. K. Squier, W. H. Gifford and Edward Moir. The usual dividend was declared and a prosperous year was reported.

The National Wall Plaster Co. has elected the following officers: President, Charles S. Averill; vice president, Daniel O'Brien; secretary and treasurer, H. E. Dingley; directors, H. H. Lincoln, R. R. Stuart, G. E. Baldwin, C. R. Walker and the officers.

The annual report of Superintendent H. H. Freeman, of the Ontonaga Salt Reservation showed that there were 101,088 bushels less made than in 1904. The total amount inspected last year was 1,642,299 bushels of fifty-six pounds each. Of this amount 159,603 bushels were produced by artificial heat and the rest was by sun evaporation. There are now 1,100,000 bushels stored at various storehouses.

The Little Falls Stone Co., of Little Falls, N. Y., is preparing for extensive quarrying operations and the West Shore railroad company is laying tracks to the Flinck farm which the company recently purchased. A big crusher will be installed.

Paul A. Jandernal, representing the Kelley Island Lime and Transport Co., of Cleveland, Ohio, was in the city recently. He advised dealers to buy cement before the price got beyond their reach. He said it was going higher all the time and there was no prospects that it would go down.

PITTSBURG, PA.

PITTSBURG, PA., February 16.—The cement and concrete operations in this city have been practically at a standstill for the past month or so, on account of the bad weather, but there is every indication that there will be a general resumption of these branches of the building trades in a very short time. There are a large number of important projects on hand which the contractors are about ready to commence work on, and the owners are anxious to have the work actually begin. The coming summer promises to be one of the busiest in the history of the industry in this section.

The Pittsburgh Construction Co. has awarded the contract for the reconstruction of the retaining wall along the right-of-way of the Baltimore and Ohio Railroad Co., on Second Avenue. The wall will be about 350 feet in length and 16 feet high. It will be pushed to completion as rapidly as possible.

The building committee of the school board of the McKees Rocks public schools has decided to build concrete walls around the Norwood and Davis schools, and will take bids on the work and materials the latter part of this month. The wall at the Norwood School will be 206 feet in length, and at the Davis School it will be 210 feet long. S. L. Gardner, No. 2 Frazier Avenue, McKees Rocks, is engineer in charge.

The Iron City Improvement Co. plans a nineteen-story addition to the Fort Pitt Hotel in this city, and will probably start work on it in the spring. The addition will cost \$1,000,000.00, and will be built on concrete foundations.

The Carnegie Steel Co. has started the construction of their new mills at Homestead, which are to cost in the neighborhood of seven millions of dollars, and in the foundations of which there will be an immense amount of concrete work, as well as for the bases for the heavy engines, rolls and other kinds of machinery. The work will be pushed along as rapidly as possible.

The Westinghouse Machine Co. has also decided to make some important changes at their plants, and will expend about \$5,000,000.00 during the coming spring and summer in improvements at these works in the way of new shops and plants. There will be a large amount of concrete work to be figured in these improvements also.

And in addition to the above mentioned improvements, the Pennsylvania Railroad Co. has announced that it will spend in the neighborhood of \$7,400,000.00, in improving the road in the Pittsburgh district. This will include a number of concrete retaining walls, one of the largest of which will be that built along the Conemaugh river between Sheridan and Bolivar. In this instance, concrete is to be put to a new use—that of changing the course of a river, and forcing it to flow a quarter of a mile distant from the present course. This well will be one of the largest that was ever attempted in the country.

The Continental Concrete Co., of Pittsburgh, has been incorporated with a capital of \$50,000.00 by R. H. Haas, Henry P. Haas and S. F. Winana. They will carry on a general concrete business.

Another company that has been incorporated within the past few weeks is the Iron City Portland Cement Co., which is capitalized at \$1,000,000.00. The incorporators are: James L. DeLong, A. F. Johnston and Charles F. DeLong. This concern will quarry and mine their own limestone and will use the by-products for the manufacture of cement and lime.

The Hoover & Kinnear Co. has been awarded the contracts for the improvements that the government will make at the locks and dams at Wheeling, W. Va. This includes the concrete foundations and lock walls.

The Pittsburgh Concrete Co., of this city, has passed out of existence, the plant having been sold on the 15th of this month by the receiver, Charles M. Johnston. The concern was located at 1201 Grant Avenue, Allegheny, and became financially involved some months ago.

The Garfield Brick Co., of Garfield, Ohio, will start a plant at that place for the manufacture of cement building blocks and concrete tile, in addition to their plant now located there.

The Alpha Portland Cement Co. has been awarded the contract for the new building to be erected by the Union National Bank, of this city. The structure is to be twenty-one stories in height, and the contract amounts to about 20,000 barrels of cement. The same company is furnishing a large portion of the cement that is being used in the construction of the new trolley line from this city to Butler, Pa.

The Portland Cement Co. advise that they are very busy, and have been awarded some large orders lately. Among these are the contracts for the cement for the Boggs & Buhl building on Penn Avenue, the cement for the completion of the McChesney building, and the Pittsburgh Terminal warehouses, the McKnight building at Twenty-first Street and Liberty Avenue, the McAteer building at Twenty-second Street and Penn Avenue, the Fort Wayne Station in Allegheny, and the Reymen building in Wheeling, W. Va.

As soon as the weather will permit, work on the local filtration plant will be pushed as rapidly as is possible. There is still an immense amount of concrete work to be done, and it is estimated that at least 300,000 barrels of cement will be used during the coming summer. The concrete work on the National Tube Co.'s new plant will also be taken up. This contract will require approximately 150,000 barrels.

Reinforced concrete bridges will be constructed during the coming summer over Coon Creek, in Washington County, and on the National pike at Uniontown, Fayette County. The contracts will be awarded by Joseph W. Hunter, State Highway Commissioner.

The Alma Cement Co., of Philadelphia, has moved their offices from that city to Wellston, Ohio, where their plant is located.

The American Refractories Co. has been incorporated by Daniel M. Kirk, B. J. Jarrett and E. P. Griffith, of Pittsburgh, and M. J. Cohan and W. W. McVeill, of Allegheny. The new company will manufacture and deal in cement, clay products, brick and fireproofing.

Slag is to be used by a company forming in this city, for the manufacture of artificial stone, building blocks, fire proofing, etc. The concern will be known as the Superior Bi-Products Co., and will be incorporated by George L. Folger, Edward P. Russell and Henry H. Freeman. The slag is to be obtained from some of the local mills, and at the start, the company will manufacture principally brick for paving.

It has been estimated that there will be at least 20,000 coke ovens built in the Pittsburgh and Conneville fields during the coming summer.

NEW ORLEANS, LA.

NEW ORLEANS, LA., February 15.—A new kind of piling is being put down here for the first time which is known as the Raymond system of piling. It is a concrete pile and takes the place of the time honored wood piling which is overlaid with cement or concrete before it is fit for a foundation. MacKenzie & Goldstein, the architects, are the ones introducing this new piling. Mr. H. Jordan MacKenzie, the senior member of the firm, says this piling is better than wood, and in fact the only feasible piling for the soil. When the improved drainage system is completed the wood piling will have dry rot and the foundations made of wood piling will be unstable to a degree. The concrete on the contrary will remain like the rocks of the pyramids, through the ages.

The concrete piling is to be introduced for the foundation for a five-story flouring mill that is to be built for H. T. Lauler & Sons. The ground floor is 42x80 feet and the walls are to be of reinforced concrete on the concrete piling foundation. The piles are to be 20 feet below the surface with a six-foot point and twenty-inch top.

The smoke stack is to be of concrete, also two grain tanks 35 feet in diameter and 40 feet high, with a capacity of 25,000 bushels. The estimated cost of the mill is \$50,000.00.

Cook & Laurie has the contract for building the Fairbanks building on Camp and St. Joseph Streets. It is to be four stories and basement. The walls are to be of pressed brick and terra cotta. The foundation is to be concrete on pine piling 60 feet deep. The base is to be of marble.

The Third District bank is to be of reinforced concrete. It is to be a one-story building with metal windows and tile floors, with marble steps and counters. The estimated cost is \$10,000.00.

Architects, builders and contractors are all rushed with work and some sharp contests are being waged for the contracts for some of the largest buildings. The architects are on their mettle and are doing their best. Possibly in no city in the land is so much attention given to the ornate features of architecture as here. In the cold matter-of-fact cities in colder regions more thought is given to the usefulness than to the beauty of a building, but here beauty, as well as utility, is to be considered.

KANSAS CITY, MO.

KANSAS CITY, Mo., February 15.—The Oswald Construction Co., of 1951 Grand Avenue is the name of a new concern who will make a specialty of granitoid and concrete work. The firm is composed of Geo. J. Oswald, J. C. Oswald and F. E. Snow. Mr. Snow will be the manager and has had long experience in the business and no doubt they will make a success of it from the start.

Mr. H. E. Maynard, of 1931 Grand Avenue, is building a concrete home for himself at the corner Elmwood and Thompson Streets. He is making all of the blocks at his factory on Grand Avenue. They are not made in a machine, but in a large box mold, an invention of Mr. Maynard's.

Mr. C. L. McDonald, manager of the Missouri Lime and Cement Co., whose offices are in the Postal Telegraph Building, said that the past season in Kansas City had been one of the largest in the history of their business, and that the outlook for spring showed no abatement in building operations. Cement has been advanced ten cents per barrel and lime five cents per barrel in this territory, but that has been made necessary by the fact that the manufacturers have not been able to meet the demand and the increased cost of production.

The Western Composite Brick Co., of which Mr. D. B. Davidson, is president, and Mr. Edwin Walters is geologist and civil engineer, is located in the Century Building. It is claimed for the composite brick that it is another one of nature's secrets, rediscovered. They have recently purchased a large plant and will make bricks by their new process for sale in Kansas City. It is claimed that these bricks can be made from products found almost universally over the country, common sand, being the principal ingredient, united with common stucco or plaster of Paris, and bonded by a secret process. It is said that an analysis of the cement or mortar used to build the pyramids of Egypt shows that it was made largely from stucco or common plaster of Paris, and that to-day this cement and mortar is as hard as iron and shows no trace of decomposition. It is claimed that these brick are made very nearly in the same proportion of sand and stucco that this analysis shows with the addition of the secret composition. These brick require no burning or steaming to bond them, but are cured in the open air and are ready to be used within two days after they are made.

DES MOINES, IOWA.

DES MOINES, Ia., February 15.—The Stehmlite Stone Works, of which Mr. Frank Stehm is the manager and whose offices are located at 101 East Walnut Street, are concrete contractors and builders of sidewalks. Mr. Stehm is the inventor of a wet process brick machine and has made rapid strides along this line. The brick are hard, smooth and impervious to moisture and he is making them in all colors. He has built a house at Colfax, Iowa, the foundation being of concrete and the upper part of cement brick. His machine makes eight brick at a time, is easy to operate, simple in construction and bids fair to become one of the factors in the manufacture of concrete brick.

Balzer Bros. are located at 615 East Scott Street. They are contractors in cement work and also make building blocks. They have had a very good business the past season and the outlook for spring trade is very encouraging.

Benson & Marxer are general contractors with offices at 425 Grand Avenue. However, their principal work is concrete construction and they have been very busy the past year, and have several large orders booked as soon as the season opens up.

J. E. Tusant is a contractor and builder at 616 High Street, who makes a specialty of cement work and builds foundations, floors and sidewalks. He has had an exceptionally good business during the past year and says the outlook for the continuation of same is very good.

The W. F. Mitchell Co. are general contractors and proprietors of the Asbestine Stone Works, 116-118 Eighth Street. W. F. Mitchell is the president and B. F. Segner the secretary. They do all kinds of cement construction work and make sills, coping, steps and blocks. They report business as being very good, but, of course, dull at this time of the year as there is very little done in cement construction work in the winter. This is one of the oldest firms of its kind in Des Moines and have always done a large business in concrete construction work.

Messrs. James Maine Sons Co. are general contractors and brick manufacturers at 119 Eighth Street with yards at 21st and Maury Streets. They do quite a good deal of cement work and have built quite a number of side walks and foundations.

The J. F. Griffiths Bridge Co., located at 310-11 Youngerman Building, are contractors and builders of bridges and culverts and have had a very busy season. They do not go after the very large bridge work, but can handle most any kind of a job if it is necessary. Mr. Robt. S. Dahlberg, is the architect for the firm.

CHICAGO, ILL.

CHICAGO, ILL., February 19.—Builders say it is one of the most remarkable building seasons they have ever experienced. The total value of the building permits issued the past week foot up \$514,200.00, against \$898,300.00 the previous week.

The great brick yards in this vicinity and contiguous to Chicago are, with few exceptions, as busy as they can be, and the increase in the stocks of brick will be enormous by the time spring building season fairly opens.

Great building enterprises have been planned to begin early just south of this city. The statement is now authoritatively made that practically the entire Lake Shore road, from Dune Park, a station of the Lake Shore road to Michigan City, a distance of some seventeen miles, extending back a mile or more, has been placed under contract or bought. It is said that Cleveland capitalists are behind this project, and that the plans contemplate the making of an harbor and the building of a large industrial city.

Many plans are being put on paper for some great buildings to be erected in the early spring. Mr. William Holabird, a well known architect of this city, when seen at his office, said: "We certainly have reached a period of unprecedented building activity. Architectural and mechanical skill in Chicago have grown equal to the demand. All the new buildings, so far as I know, are fire-proof."

Good Demand for Cement.

The cement season, in view of an early spring, is likely to be an active one. Dealers are anticipating one of the most active periods they have ever had. The city itself will use an enormous quantity of cement, as a good many miles of new sidewalks are to be laid.

Dolese & Shepherd have large contracts on hand. The Wisconsin dealers in cement have also secured several contracts and expect to commence their work early this year in view of the continuance of mild weather and an early spring opening. All the concrete dealers are in fine feather over the season's prospects.

An effort is now being made in some quarters to raise the price of cement 25 per cent, while Chicago dealers and manufacturers of Portland cement deny that any combination is being formed, a 25 per cent rise in the prices for the coming season is said to have been arranged for all the big cities in the country. It was also reported that the La Crosse, Wis., dealers and sidewalk contractors were to be lined up in the combination. Cement dealers here, when seen, said that there had been some talk of an advance, but that they themselves knew nothing about it.

The Stearns Lime and Crushed Stone Co., 165 E. Randolph Street, report business quiet just now, but the prospects for more than the usual activity are excellent.

In the lime trade there is a fair business doing, owing to favorable weather conditions. The Wisconsin Lime Co., Chamber of Commerce, report their prospects as exceedingly promising for the coming season. The Union Lime Co. also say the outlook for the coming season was never better than at this time. Others engaged in the lime business were seen, but had no special report to make. Lime is quoted at 65 to 70 cents per barrel.

Illinois Brick shares have advanced to 71. The talk is of large earnings. The company seem to be enjoying a good deal of prosperity.

The National Brick Co., of which Mr. B. F. Weber is president, has signed the Brickmakers' Union agreement. The yards will soon be in full operation and anticipate getting their full share of business.

The Chicago Supply and Equipment Co., fifth floor Old Colony building, report business looking up very materially. Mr. George C. Marsh, the president of the company, is highly pleased with the outlook, and expects to do even a larger business than last year, which was a record breaker.

MEMPHIS AND THE SOUTHWEST.

MEMPHIS, TENN., February 19.—The building projects go forward as spring approaches and the volume is increasing every week. Several large warehouses for the Southern Railway are projected now, and they will be of brick construction. The various sand, lime and cement firms make good trade reports and the old Mississippi is being brought more into play as a transportation source. The outlook in the Southern and Southwestern country is for plenty of contracts, plenty of work and good prices.

ARKANSAS.

Chatwin Bros. & Clegg Sand Co., at Little Rock, has changed its name to Chatwin Bros. & Clegg Sand and Rip Rap Co. The capital stock has been raised to \$100,000.00, for the purpose of increasing its sand plant capacity, and handling the Davie Neal Patent Anchor Rip Rap System in all territory running east and west, south of the city of St. Louis. The Neal system is being used by this company on a large contract for the Cotton Belt railroad at the new bridge across Red River at Shreveport, La. They have purchased David Neal's boat and barges now at work for the Iron Mountain railway, handling the anchor rip rapping at the bridge that crosses the Arkansas river near its mouth.

Robt. Kuntsman, of Chicago, representing the Arkansas Soapstone and Refractory Co., has been casting about for a location for the factory at Little Rock or Benton, Ark. The company owns 320 acres of land in Saline County which will furnish the material for the manufacture of fire clay. It is proposed to erect several large kilns.

At Benton, Ark., the Arkansas Concrete Co., of which B. F. Henry is manager, has about finished the material for a two-story concrete building that is to be erected this spring by Dr. J. W. Walton on the Glenn corner. W. A. Crawford & Son will occupy one of the store buildings.

The Hot Springs Brick, Tile and Pottery Co., is the name of a new company which is about to be incorporated at Hot Springs, Ark. The company is an offspring of the Interstate Clay Products Corporation, of Cannellton, Ind., and Owensboro, Ky., which has lately incorporated to erect plants to manufacture clay products of every description, and which is about to erect several plants in Indiana and Kentucky. Wm. Francis Keates, president and general manager of the Inter-State Co., has been in Hot Springs for several weeks investigating the local clay deposits, and after making a series of tests has advised his company to locate a plant at Hot Springs. North of the city he has found valuable clays and shale, suitable for the manufacture of high grade pressed or face brick, enameled and glazed bricks and tiles, floor tiles and art pottery wares, all of which the company will manufacture. The company will have a capital stock of \$125,000.00, most of which will be taken by the Inter-State Co. or its associates.

THE TERRITORIES.

Jos. McGinnity has leased a site at the corner of Seventh and Choctaw Streets, South McAlester, I. T., and will establish a factory for the manufacture of hollow building blocks. He expects to have the plant in operation in two weeks.

J. E. Malloy will locate a granite finishing plant at El Reno, O. T. The company will have a capital stock of about \$14,000.00.

J. L. Tannehill, a large brick manufacturer from Lima, Ohio, has been at Waggoner, I. T., prospecting with a view to locating a brick plant if the clay tests are satisfactory.

J. M. Bickel and John Poorman, of Anthony, Kan., have been at Quinlan prospecting, preparatory to opening up a quarry and utilizing the large quantities of plaster rock that covers the country east of town. The rock will be shipped to Alva where the mill is located. Four hundred tons a day is what is wanted to start with. Mr. Bickel states that within a month he expects to have forty men at work.

TEXAS.

The Tiffin Crushed Stone Co., of Tiffin, Texas, has been incorporated with a capital stock of \$15,000.00, by John T. McElroy, of Midland; D. J. Rogers, of Barstow, and J. S. Love, of Pecos.

MISSOURI.

The American Ballast Co., of Chicago, will have within thirty days a branch office and store established in Kansas City, Kan. S. B. Fleming, president of the company, has purchased a site at

Eighteenth Street on Osage Avenue for \$6,400.00. The American company supplies burnt clay ballast and track finish for railways, a substance that is being largely used. The machines for converting raw earth into the finished product are mounted on car trucks and the Kansas City, Kan., property will be used largely for the storage of these.

KANSAS.

The Independence Portland Cement Co., of Independence, Kan., has 1,700 cars of machinery ordered which will be arriving all summer. The switches of the Missouri Pacific, at Independence, are now full of this machinery. The Western States Co., at Independence, is now turning out twenty cars per day, and when the work of installing the four extra roasters is through with will turn out thirty cars a day. These roasters are now at Independence and will be put in at once.

Geo. E. Nicholson and associates have taken charge of the Indian Portland Cement plant, at Neodesha, Kan., and will operate it in the future. This plant is a modern cement works and has been in operation about three months. It has a daily capacity of 1,200 barrels. It is the intention of the new management to increase the capacity of the plant at once to 2,000 barrels per day. This work will be done under the supervision of Leigh Hunt, the well known Iowa engineer, now erecting a big cement mill for the Kansas Portland at Independence.

The Atchison Sand, Gravel and Rock Co., of Atchison, Kan., has purchased machinery for its plant on the B. and M. tracks north of town. The sand and gravel will be washed out by hydraulic process and a \$1,000.00 centrifugal pump will be used. A heavy engine and boiler plant will be necessary.

At Independence, Kan., engineers have about completed the survey for the switch to the proposed site of the Independence Asphalt and Rubber Manufacturing Co.'s plant. The asphalt company is now waiting for the completion of the switch to commence work, but now has a large force of hands blasting and excavating for the reservoir of the plant.

Arkansas City, Kan., will have a cement block and granitoid block depot of supplies. Geo. C. Hunge, recently of Ohio, will conduct such a business. The machinery has been ordered from a factory in Michigan. Sidewalk contracts will also form a part of the business.

Bailey & Stocking are operating a new cement block machine at Larkin, Kan. On this machine they make blocks from 4 inches to 48 inches in length.

Workmen are busy near Marysville, Kan., building the new gypsum mill for the Blue Rapids Plaster Co. This is the company that struck a 59-foot vein of gypsum rock by drifting back only a short distance from the base of a Kansas hill. It is thought the mill will be in operation by March 1. Marysville, Kan., capital is interested in this new enterprise. Capt. Perry Hutchison, of the Excelsior Flouring Mills, is president; H. A. Horn is secretary.

J. S. Stoner, of New Castle, Pa., has completed arrangements to put in a new plaster mill at Coffeyville, Kan. The same will be known at the Kansas Wood Pulp Plaster Co.

THE WEST COAST.

SAN FRANCISCO, CAL., February 12.—Building operations which have been at the low ebb since the beginning of the year, are opening up somewhat and the coming month is expected to show a great increase. The rains are still interfering with concrete work, including sidewalks, walls, etc.

The supply of foreign cement is still short and prices have been ranging from \$3.25 for Alsen's to \$4.00 for small lots of other makes for quick delivery. Over 200,000 barrels of foreign cement are afloat for this port for one firm, which is now entirely sold out, and it is predicted that within two months the shortage which has existed for a year will be relieved and lower prices will prevail. Domestic cement is in somewhat better supply at prices around \$2.15.

The Pacific Portland Cement Co. is enlarging its cement mill at Cement, Solana County, and will add some new features, and the company is still sending a large portion of its output away to a distance for use on government irrigation projects.

The Santa Cruz Portland Cement Co. is erecting the buildings for its new 4,000-barrel cement plant at Davenport, Santa Cruz County. The machinery

is awaiting transportation and will be hauled in as soon as the new Ocean Shore railway is completed from Santa Cruz.

During January 457 building permits were issued, the total estimated cost of the structures being estimated at \$1,070,466. The estimated expense of the building work actually undertaken during January was \$1,500,000.00. Plans are in the architects' office for a number of large office buildings and for the reconstruction of several large buildings.

The Lindgren & Hicks Co., of San Francisco, is superintending the construction of a reinforced concrete "bag-house" at the Selby Smelting and Lead Co.'s smelter in Contra Costa County, Cal., in which is incorporated some novel construction features. An additional reinforced concrete building costing about \$30,000.00 is also being planned by the same company for the Selby works.

William T. Garrett, of San Francisco, is making a thorough examination of lime deposits on the properties of William Robinson and Elizabeth M. Pierce, on Bird Creek, Cal., under an agreement with the owners to pay them at a specified rate while prospecting and developing until the land is purchased or abandoned.

The Pacific Concrete Machinery Co., C. W. Jones, manager, has moved its offices to 202 California Street. The agency is carried for the Hercules cement stone machines built by the Century Cement Machine Co., Rochester, N. Y., and also for the Atlas Cement Machine Co.'s fence post machine. A number of the Hercules cement stone machines have been sold throughout California and business is improving. A \$15,000.00 bank will be built at Condon, Ore., by Marshall Bros., of Portland, who will use one of these machines to make hollow concrete blocks for its construction.

The Granite Rock Co., of Watsonville, Cal., Jas. Sutton, constructing superintendent, has completed a \$27,000.00 bank at Susanville, Cal., of hollow stone blocks made by a Hercules machine.

The Holland Sand Stone Brick Co.'s plant at Antioch, Cal., has been shut down for a few days to permit of installing a new sand dryer, which has a capacity of 100 tons a day. The new press has been in operation for some time, but a greater drying capacity was needed. The output of the factory will be 40,000 a day when work is resumed. The output of the plant is sold ahead for three months, and there are good inquiries showing that these brick are growing in favor with architects.

A new Catholic church at Antioch, Cal., constructed entirely of Holland sandstone brick, has been completed at a cost of \$15,000.00.

The California Portland Cement Co.'s large cement works near Colton, are to be enlarged. Over \$250,000.00 will be expended. T. J. Fleming is manager of the plant, which will have a daily capacity of 1,500 barrels of cement.

The discovery of asphaltum deposits on the north and south slopes of Waterman Mountain, 35 miles northeast of Kramer, Cal., has resulted in a general rush to that section. Within two days 20,000 acres have been located. The discovery of asphaltum was made by Mrs. Florence Wilson and Miss Anna Spencer. They had built a fire in a creek bed, and when a dense smoke arose they investigated with gratifying results.

H. E. Ford and F. J. Ford have purchased two Hercules cement stone machines and will erect a plant for the manufacture of stone blocks at Spokane, Wash. A stock company will be formed to operate the artificial plant.

The awarding of contracts for the first unit of the Klamath irrigation project in Southern Oregon means the beginning of the \$4,000,000.00 system recently approved. Other contracts will follow, as plans are completed and the demand for land increases. The larger part of the contracts awarded goes to Mason, Davis Co., of Portland, who underbid thirteen competitors from Oregon as well as other States. Their aggregate contract amounts to \$377,330.00. The rest of the contract amounting to only \$6,828.00, was awarded to the International Contract Co., of Seattle.

Probably before this first canal is completed, contracts will be let for another unit, the Klamath project, as there is ample money on hand, five times as much in fact, as is called for by the first contract. It is expected that work on this new canal will begin as soon as Mason, Davis & Co. furnish bonds and are able to get the machinery and workmen into the Klamath country. Work should be well under way by spring and twelve months ought to see the first unit of Klamath project completed and in operation.

Arrangements are about completed for the erection of a plant in Hollister for the manufacture

of hydraulic cement bricks, under the Ferguson patent. These bricks are said to be as lasting as stone, more durable and about 20 per cent cheaper than the ordinary red brick. Six acres of the Pierce tract, including the gravel pit, have been located. The patent rights for this district have been secured by O. L. Lamson and it is his intention to supply this and the adjoining country from the local plant.

The George Goodman Artificial Stone Co. has secured a \$7,000.00 contract for concrete foundations of a seven-story hotel building on Geary Street, between Powell and Mason Streets.

The Portland Stone Brick Manufacturing Co. has been incorporated at Portland, Ore., by M. B. McFaul, T. K. Muir and F. King, with a capital stock of \$75,000.00.

The Jepson Cementine Co. has been incorporated at San Francisco with a capital stock of \$60,000.00, of which \$350.00 has been subscribed by J. C. Jepson, E. K. Taylor, F. J. Buttrick, L. E. Boyce, S. E. McCormick, D. O. Druffel and J. M. Toner.

LOUISVILLE, KY.

LOUISVILLE, Ky., February 21.—The most gratifying reports are being heard on every side, regarding the outlook for building operations. Never in the history of this city have prospects been more encouraging and one particular feature, which is worthy of mention in this connection, is the growing demand for concrete work of all kinds. The local operators in concrete report that the outlook is for one of the busiest seasons ever known, and in some cases they have been compelled to put on additional office force in order to take care of the work that is being figured on. A large number of important structures are now under way and others are being arranged for and in nearly every instance considerable concrete will enter into their construction.

It is said that the Belknap Hardware and Manufacturing Co., who are just completing a large reinforced concrete office building, will soon have plans ready for bids on a much larger structure to be erected on the corner of First and Washington Streets, for use as a warehouse.

The concrete block industry is likewise growing in popularity and several new organizations have just begun operations in that line in this city. The cement outlook, both for Portland and natural cement is most flattering, and those engaged in the manufacture of this commodity are very gratified over the outlook. The same can be said of lime, hard wall plaster, sand and fire brick, not omitting roofing materials and building supplies, as the unprecedented activity in building operations must of necessity demand large amounts of the various supplies above mentioned.

At the office of the National Concrete Construction Co. in the Board of Trade building, Mr. J. B. Ohligschlager said that they were figuring on considerable work and they had their hands full, and were confident that they would have more work than they could reasonably take care of during the entire season. He expressed himself as being satisfied that this would be the banner year in concrete construction, and save from the fact that there might be some labor trouble, they look for big returns. There is more than a probability that the construction people will have to combat this evil, as there were already indications which looked threatening. Still, they were not going to anticipate them and if such an unfortunate state of affairs did develop, they would simply make the best of it.

The Southern Roofing and Paving Co., are quite busy on concrete work, though in roofing lines they are not so busy, as it is a little early for many orders in this line. They look for a very active season both in concrete construction and roofing, and aside from having a number of large jobs on hand at the present time are figuring on considerable more work.

The Falls City Artificial Stone Co., report the outlook as favorable and are preparing for a big year. They feel that there will be more concrete block construction work done during the present year than ever before and are in a position to handle any number of large contracts.

One of the newest organizations in the concrete line in this city has just been incorporated at Frankfort, Ky., which is known as the James B. Wilson Concrete Co. This organization has a capital stock of \$25,000.00, fully paid up, and the officers are Yewell Rice, president, Louisville, Ky., and James B. Wilson, general manager, Chicago, Ill. This company will do a concrete business devoted

ing most of its time to the construction of large buildings. They have secured a contract for the erection of a fourteen story re-inforced concrete building to be erected for the Globe Investment Co., St. Louis, Mo. Work on this structure has already been started. They are also bidding on a number of large contracts in various parts of the country and anticipate doing a very extensive business.

The Louisville Fire Brick Works, Highland, Park, Ky., report their business as being most favorable. The orders continue to come in so rapidly that they find it difficult to take care of them. A number of improvements are being contemplated, which will be made public in the near future.

The National Roofing and Supply Co., report an active demand for concrete work, asphalt and roofing. They have an ample supply of orders on hand, which will keep them busy for some time.

The Central Concrete and Construction Co., has just been organized with the following officers: Robert C. Morris, president; Taylor V. Brown, vice president, and Arthur Kaye, treasurer. This company will purchase building sites and construct concrete residences in various parts of the city.

The P. Bannon Sewer Pipe Co., which also, owns and controls the Kentucky Vitrified Brick Co., are quite busy in both lines. The original founder of this organization was Patrick Bannon, who died on the night of February 6, Mr. Bannon was one of the pioneers of this city and in 1860 organized the P. Bannon Sewer Pipe Co., which grew from a very small plant to one of the largest in the country. The product of this company has been shipped to all parts of the country. The business will be continued by his son, Mr. M. J. Bannon and others interested in the organization. Mr. Bannon was a very highly respected citizen and one of the best known men in the city. He was very much respected and admired for his sterling qualities and a large number of friends mourn his loss.

SALT.

A Year's Industry in Salt.

The State salt inspector of Michigan has filed his annual report for the year 1905, which shows the following amounts for the several districts:

Saginaw district	156,978
Eay County district	366,968
St. Clair County district	1,540,513
Manistee County district	1,921,634
Mason County district	665,001
Wayne County district	1,020,159

Total barrels

Of the salt manufactured in the State 2,830,217 barrels were of medium grade, 943,915 of granulated No. 1, 849,225 of medium No. 1, 706,525 of granulated medium No. 1, 11,038 of medium No. 2, 8,047 of granulated No. 2, 110,339 of packers' salt and 469,959 of table salt.

Conditions in the salt industry in Michigan look favorable for a brisk year in 1906, and the output will probably be larger than during the past year.

A Large Salt Organization.

The Detroit Salt Mining and Manufacturing Co., capitalized at \$500,000.00 has been organized at Detroit, Mich., by a party of Detroit capitalists, to sink a mine for rock salt on Irvine & Wise's subdivision in Rockwood. The incorporators of the company are: J. M. Mulkey, O. W. Mulkey, James D. Standish, Clarence A. Black, W. H. Miller, A. E. F. White, W. H. Irvine, C. F. Brett and W. E. Jennings.

An attempt recently to sink a shaft in that district for mining rock salt had to be given up on account of the flood of water which entered the shaft, but it is believed a point has been selected where it can now be done.

The Detroit Salt Co., of which J. M. Mulkey is president, will be included in the new company if the sinking of the new shaft proves successful.

There are only three rock salt producing districts in the United States. Onemine is in New York State, one in Louisiana, while there are three mines in Kansas. There is said to be a good demand for all of the rock salt that can be produced.

The Grand Saline Salt Co., of Grand Saline, Tex., has been organized with a capital stock of \$60,000.00. The company will manufacture and sell salt. The capital stock is \$60,000.00. James Kirk, R. Kirk, Thos. S. McGraw, all of Grand Saline, and Emerson Carey, of Hutchinson, Kan., are the incorporators.

Sand and Gravel

Concerning Slack Sand.

SAN FRANCISCO, CAL., January 12.—Black sand is found in more or less quantities in a great many places in California, and in many points all along the Pacific Coast. However, this material has never been used to any extent in the way of building material—either in the mixture of mortar or cement. For some reason black sand has been given the "go by" among builders and contractors, yellow and white sand being always given the preference.

But it seems after all, black sand has not been found entirely without its uses—or at least, valueless. The placer gold miner has regarded black sand, from the earliest period in the history of the industry, as an intolerable nuisance, interfering with the "clean up," and robbing him, despite all his care, of an appreciable quantity of the finer gold in the operation of separating the precious metal from the dross collected in his sluices.

It has been reported and never denied, that the foundations of the fortune of a California pioneer publisher, now dead, were laid from the gold which he patiently recovered from the black sand which he gathered from the miners of the camps in which he was located in '49. This he is said to have done by treating the sand with quicksilver in an old whiskey barrel. However, he had few imitators, and most placer miners have been only too glad to get rid of the black sand that collected in their sluices in any way.

Dr. David T. Day, Chief of the United States Geological Survey, has recently made a series of examinations during the continuance of the Lewis and Clark Exposition, held at Portland, Ore., of black sand. These experiments were made with sand collected from various parts of the Pacific Coast with the view of ascertaining whether it possessed any commercial value or not. The first discovery he made was that some black sands contained enough platinum to justify treatment for the recovery of that metal which is now as valuable as refined gold. This has stimulated the search for platinum-bearing gold sands. Dr. Day's later discovery is that many of the Pacific Coast black sand deposits contain a large percentage of iron equal to the Norwegian product.

In one experiment he obtained 683 pounds of iron from a ton of black sand. Whether these sands can be made profitable to mine and smelt must depend upon the volume of the deposits. Dr. Day claims to have discovered an economical method of treating them for the recovery of the metal. Just what it consists of, has not been made known yet. If crude petroleum can be used for smelting the ore, it will furnish a new market for the California output. Incidentally an existing industry would thus be materially helped, through the development of a new one of equal importance.

Big Southern Organization.

The Lake Sand, Shell and Gravel Co. has been organized at New Orleans, La., with a capital stock of \$25,000.00. The company will do a general contracting, freighting and towing business and deal in sand and shells for building and paving purposes. Those interested in the new organization are Henry B. Schrieber, J. Salmen, Peter Judlin, A. M. Schreimlin, J. J. Voelkel and H. C. Shearman.

The Wabash Sand and Gravel Co., has been organized at Urbana, Ill., by John W. Stipes and others of Urbana and Champaign, Ill. A large tract of sand and gravel land has been purchased by the company.

A company will soon be organized at Sandusky, Ohio to be known as the Sandusky Lake Sand and Gravel Co. Edward Ohlemacher and Fred Limke are interested. A sandsucker has been purchased.

Operate a Large Sand Plant.

The Toledo Stone and Glass Sand Co., Toledo, O., make a specialty of washed stone, the fame of which has spread over a wide territory. They also make what is known as the "Sylvania Brand," a pure grade of white silica sand. Mr. John H. Crawford, the secretary and manager of the sales department, is seriously considering enlarging his operations so that he will be able to cover a larger area. The great variety of uses to which crushed stone is now being adapted is rapidly increasing. When of good quality and properly prepared, it is the best and cheapest material on the market for concrete work, railroad ballast, street paving, road building, hollow concrete blocks, furnace, flues, etc.

Their quarry and plant are located at Silica, Ohio. They have a capacity of 110 cars daily of their different products and they employ something like 200 men in the various departments.

Have Changed Name.

LITTLE ROCK, ARK., February 14.—The name of the Chatwin Bros. & Clegg Sand Co., has been changed to the Chatwin Bros. & Clegg Sand and Rip Rap Co. The capital stock of the company has also been raised to \$100,000.00. The capacity of its sand plant will be increased and in addition to this the company will also handle the David Neal Patent Rip Rap system in considerable territory in this section. Boats have been purchased and preparations are under way for operating extensively. This company is quite busy with fine prospects.

The Gibbony Sand Bar Co., of Berton, Va., has been organized with a capital stock of \$10,000.00. The company will deal in and ship sand.

J. L. Breathwit, of Shreveport, La., and others have purchased a deposit of silica sand near Marshall, La., and will engage in the industry on a large scale.

The Gocella Stone and Sand Co., has been organized at Falls Creek, Pa., with a capital stock of \$60,000.00.

The Fox Silica Sand and Stone Co., of Ridgway, Pa., has been incorporated with a capital stock of \$25,000.00.

The Moselle Land and Gravel Co., of Moselle, Mo., has been organized with a capital stock of \$14,000.00, all paid up. The incorporators are J. C. Smith, A. P. Smith, both of Youngstown, Ohio, and Jas. A. Powers, John Bruns and James Booth.

The Lincoln Sand and Gravel Co., of Cleveland, Ohio, has been organized with a capital stock of \$30,000.00.

The Springfield Sand and Cement Co., of Springfield, Ill., has been organized with a capital stock of \$5,000.00, to deal in gravel, cement and construction. Charles H. Freitag, George F. Stelte and J. R. Gardner are the incorporators.

The Enterprise Sand and Stone Co., of Trenton, N. J., has been organized with a capital stock of \$100,000.00. Guy M. Neagley, Mark G. Hibbs and Jas. R. Neagley are the incorporators. The company will deal in sand and cement.

The Foxburg Sand and Stone Co. has been incorporated at Pittsburg, Pa., with a capital stock of \$50,000.00. Those interested in the company are: Drs. W. S. and J. O. Flower, J. W. Murray, E. G. Hays, R. L. Richardson and G. M. Harton. They have secured control of a large tract of land in Foxburg known as the Fox Estate.

The Louisiana Sand and Gravel Co., of New Orleans, La., has been organized with a capital stock of \$100,000.00. The officers are: Fritz Jahncke, president; Chas. Godchaux, vice president; Jonas Heller, secretary and treasurer. The organization will do a general sand and gravel business.

The Chesapeake Sand Co., of Baltimore, Md., has been incorporated by Jacob Katz, Jno. J. Lissner, Wm. G. Tower, M. J. Lotes, J. Wm. Hoffman. The capital stock of the company is \$1,000.00.

The South River Clay and Sand Co., Jersey City, N. J., has been incorporated to mine and refine all kinds of sands and clays. The office is at No. 1 Exchange Place, and those interested are: Joseph D. Bedle, Mathew C. Jenkins, Jersey City, and J. Fraser Reid, of New York. The capital stock of the company is \$100,000.00.

Quarries.

The National Quarry Owners' Association.

Meets Semi-Annually.

D. McL. McKay, Chicago, Ill. President
S. M. Hall, Bucyrus, Ohio First Vice President
Chas. Pfeiffer, St. Joseph, Mo. Second Vice President
B. F. Frosney, Jacobsville, Mich. Third Vice President
E. H. Delebaugh, Louisville, Ky. Secretary-Treasurer

Official Organ, ROCK PRODUCTS.

Utilize Your Waste.

Concrete is being used for a great variety of construction purposes in increasing volume. This is shown by the growth of production of Portland cement in the United States in twenty years, from 200,000 to over 30,000,000 barrels annually. At most quarries the by-product, dust or screenings, has usually been allowed to go to waste. Large and unsightly piles of broken stone waste and screenings are allowed to accumulate until they are actually in the way and then they are moved at great expense.

This can be utilized at the present day and becomes a source of revenue if properly handled. The superiority of this material over sand and gravel is unquestioned. Sand, unless possessing silica and is sharp makes poor concrete. The crushed stone is far superior owing to its sharp surfaces and the fact that it contains lime in large quantities which combines with the cement, making a stronger union.

As an experiment try one crusher and get rid of the waste material on hand which is in your way. Usually you can find a market for this at home but it can be shipped in carload lots to quite a distance at a profit. It will pay quarry owners to investigate this proposition more thoroughly. Many are already getting out large quantities and making a nice profit. There are old abandoned quarries which it no longer pays to work for building or rubble stone that would yield a handsome profit if a crusher were installed and the product sold to the worker in concrete.

In all large cities the demand for this crushed stone is ever on the increase. In many places there is a positive dearth of sand or other material for concrete work and slag and ashes have been utilized. This, however, is not nearly so satisfactory as crushed stone and is usually used only as a last resort. Sand is getting higher in price as it becomes scarcer. The cost of hauling from great distances places the crushed stone on an equal footing.

Winterset Stone and Material Co.

DES MOINES, IOWA, February 18.—The Winterset Stone Material and Construction Co. was organized at a meeting held in Des Moines recently. It is to be incorporated by the Des Moines, Winterset & Creston Electric Railway Co., and capitalized at \$15,000.00. The stockholders of the railway company will be the stockholders of the new stone company.

The company expects to open a large stone quarry near Winterset and quarry the well known Madison County stone.

Dimension and crushed stone for building materials will be supplied.

It is the intention of the company to develop this stone quarry along with its interurban and when the road gets in operation the business will be pushed throughout the State. It is probable that much of the stone secured when the quarry is first opened will be used to ballast the road bed of their line.

The Warner-Quinlan Co., of Syracuse, N. Y., has purchased of Lawrence Byrne a quarry covering fifty-seven acres on the Jamesville road. They will quarry building stone and also establish a crushed stone plant.

New Crushed Stone Industry.

LITTLE FALLS, N. Y., February 16.—The Power and Mining Machinery Co. are opening up a quarry at Little Falls, N. Y., on the Erie canal and West Shore railroad. No stripping is necessary, and with a breast 3,000 feet long and from 30 to 60 feet high the quarry conditions are ideal. They will erect a stone crushing plant, the capacity of which will be 4,000 yards per day or nearly 200 carloads. The latest improvements and methods and an enormous output enables profitable sale of the product for about the actual cost of production in an ordinary plant. A great portion of the output will be used in building roads. The new barge canal, on which this plant is located, will require vast quantities of crushed stone, as 60 to 70 million cubic feet of concrete are to be put in. The Little Falls Stone Co. has the contract for the N. Y. C. & H. railroad, for crushed stone for reballasting and for concrete. One hundred thousand yards per year, or forty carloads per day, are required. The by-product has heretofore been taken out and dumped at considerable expense. This is now to be used to make concrete bricks. The plant is to be built by the company adjoining its crushing plant, and will have a capacity of 90,000 bricks per day. They can be produced for \$3.00 per thousand or two-thirds the cost of common brick. One building firm has offered to take the entire output at a good price, for shipment to New York City, via Erie canal, where common bricks now sell for \$12.00 per thousand.

New Crushing Plant.

REDGRANITE, WIS., February 2.—Wm. Bonnerman the superintendent of the Wisconsin Granite Co., says that his firm has nearly completed a large crushing plant, a No. 6 and a No. 3. They have the accumulation of years of waste stone from the old paving and stone cutters and expect to do a great business in crushed stone this year. This firm was the first to introduce the granite paving block into Chicago and supplied most of the paving blocks used in that city and Milwaukee. They have also furnished considerable building stone for these points. Now that they have introduced the crushed stone business their operations will embrace everything that a granite quarry can produce.

Quarry Changes Hands.

VANCOUVER, B. C., February 13.—The Coast Quarries Co. has secured control of the North Arm quarry, paying \$10,000.00 for the land and an additional \$2,000.00 for the plant. The men back of the organization are Champion and White, Gross & McNeil, R. Martin, J. B. Mathers, J. R. Gray and others. The quarry is on the B. C. E. R. Co. They will furnish crushed stone for the city and also supply rock to private contractors. They can supply 1,500 yards weekly.

Will Make Improvements.

CARTHAGE, MO., February 19.—The Myers Stone Co. have recently made an addition to their plant in the shape of a new derrick and hoister and a new building for same. They will also build a lime kiln to burn up all of their waste stone. This should prove a profitable investment as it is well known that these deposits are almost pure lime. They will use natural gas for burning it. Business has been very good and they are looking for even a better year in 1906.

Started Up Again.

LA GRANGE, ILL., February 13.—The La Grange Stone Co. have started up operations again after a temporary suspension, owing to an accident in the engine room. They are making some changes on their bins and machinery and expect to double their capacity during the coming season. This is one of the largest concerns here and gives employment to quite a number of men.

Business Excellent.

WACO, TEXAS, February 1.—The Central Quarry Co., whose headquarters are located here are very busy. Their quarry and works are at Oglesby. They have a capacity of 25 cars per day of crushed stone, riprap, rubble and dimension stone. Mr. O. N. Wiel is the manager.

The Pennsylvania Quarry and Supply Co., a new industrial corporation in Tunkhannock, Pa., has purchased land on the north side of that town on which a stone mill will be established this spring.

The Haverstraw Trap Rock Co. is the title of a new company formed to quarry and crush stone, at Haverstraw, N. Y. Capital \$250,000.00. The incorporators are: Charles A. Brown, Elizabeth, N. J.; Louis D. Beck, Hotel Breslin; John D. Miller, No. 14 Morningside Avenue; John C. R. Eckerson, No. 168 West Thirty-eighth Street, all of New York.

The Atchison Crushed Stone Co. has been incorporated with a capital stock of \$5,000.00. Mr. F. J. Clores will be the president; Mr. George W. Graves, vice president and general manager, and George Balcomb, secretary and treasurer. The company has purchased land on the bluff side near the Nass & Walters brick yards and will put in a stone crusher at once.

The Prudential Construction and Improvement Co., has been organized at New York City, with a capital stock of \$50,000.00. The company will do a general contracting business. The incorporators are: Thos. E. O'Shea, Summit, N. J.; Louis W. Stolesbury and Horatio S. Byrne.

O'Brien Bros., of North Hempstead, N. Y., have organized with a capital stock of \$200,000.00 to do a general contracting business. Henry, Thos. F. and Joseph J. O'Brien, all of New York, are the incorporators.

The Michigan and Indiana Construction Co., of Jersey City, N. J., has been organized with a capital stock of \$125,000.00. The company will do a general contracting and construction business. W. P. Chapman, Edgar Madden and F. L. Russell, all of New York, are the incorporators.

The Flynn Contracting and Construction Co., of New York, N. Y., has been organized to construct sewers, roads, etc. The capital stock is \$50,000.00. The incorporators are: Daniel Flynn, Long Island City; John L. Tablin and John H. Pyker, of New York.

The National Dump Car Co., of Augusta, Me., has been organized with a capital stock of \$300,000.00. The company will deal in dump cars, etc. The officers are: President and treasurer, J. L. Fairbanks; clerk, L. A. Eurligh.

The Oregon Construction Co., of New York, N. Y., has been organized with a capital stock of \$50,000.00. The company will do a general contracting business. Ira F. McCabe, Charles F. McManus and Fred L. Cadogan are the incorporators.

The Columbus & Dorfman Construction Co., of New York, N. Y., has been organized with a capital stock of \$10,000.00. Lewis Dorfman, Isaac Dorfman and Bernard Columbus are the incorporators.

The North American Construction Co., of Boston, Mass., has been organized with a capital stock of \$100,000.00. The officers are: F. E. Smith, Lynn, Mass., president; R. G. Blanc, Winthrop, Mass., treasurer; C. F. A. Smith, Boston, clerk.

The Johnston & Edwards Engineering and Construction Co., of Jersey City, N. J., has been incorporated to do engineering and construction work. The capital stock is \$20,000.00. Ross P. Johnston, New York City; Jos. W. and David F. Edwards, of Jersey City, are the incorporators.

The Finance, Engineering and Construction Co., of Camden, N. J., has been incorporated with a capital stock of \$10,000.00. The company will engage in the contracting and construction business. John A. MacPeak, T. R. Hansell and George H. B. Martin are the incorporators.

The Atlanta Constructing Co. has been organized at New York City, with a capital stock of \$1,000.00. The company will engage in the contracting, road and railway construction business. Wm. J. Cunningham, Philip J. Keams and Hanora V. Keams, all of New York City, are the incorporators.

The Raleigh Construction Co., Jersey City, N. J., has been organized with a capital stock of \$10,000.00. The company will engage in the construction of bridges, piers, docks and all kinds of excavation. Chas. N. King, Le Grand Bonker and W. M. Greene, are the incorporators.

The Toledo and Fort Wayne Construction Co., Jersey City, N. J., has been organized with a capital stock of \$10,000.00. The company will construct and equip railroads, approaches, viaducts, etc. Clarence S. Brown, Harold Nathan, both of New York, and William M. Clark, Netherwood, N. J., are the incorporators.

Lime.

The National Lime Manufacturers' Association.

Meets Semi-Annually.

Peter Martin, Huntington, Ind. President
O. F. Perry, New York City First Vice President
W. B. Hill, Kansas City, Mo. Second Vice President
A. A. Stevens, Tyrone, Pa. Third Vice President
C. W. S. Cobb, St. Louis, Mo. Treasurer
B. H. Delebaugh, Louisville, Ky. Secretary

EXECUTIVE COMMITTEE:

Chas. Warner, Wilmington, Del.; O. W. Robertson, Milwaukee, Wis., and the President.

Official Organ, ROCK PRODUCTS.

A DEMAND FOR UNIFORM QUALITY.

Users of lime are becoming more exacting every day in their requirements in regard to this product and the sentiment in favor of a standard quality is rapidly gaining favor. Cement consumers have practically reached this point in relation to the chief product in their industry and every bag or barrel of cement must pass a test to prove itself of uniform quality throughout. Cement mills are careful to keep their output up to the standard grade as specified by their largest customers, and it is safe to say that there is practically no variation in the chemical composition of their goods.

Perhaps the most important thing about a cement plant is the quarry, and here we find the utmost care exercised in the selection of the rock from which the material is produced. The chemist of the plant carefully studies the properties of the rock taken from various points in the face of the quarry and knows to a nicety the difference existing between rock in different parts of the quarry and he points these facts out to the engineer who is careful to see that the rock is so quarried as to make each load an average of the entire output of the quarry. In this way the cement man knows exactly what kind of cement is produced from his rock, and necessarily keeps every barrel of his product of a uniform grade.

The lime man is practically in the same position as his brother, the cement manufacturer, in as much as both rely upon the quarry for the supply of material for manufacture. Why does he not be as careful in the selection of his material? For instance, if a lime manufacturer operated a quarry, say 1,500 feet long in which were exposed four strata of limestone, he would perhaps have a greater variety of rock than strata. Rock in the upper stratum may contain an abundance of calcium oxide while the lower ones may be full of magnesium. Rock in the south end of the quarry may contain properties entirely different from those contained in the north end, and vice versa. Then there may be a disintegrating stratum lying between two other strata. So it can be seen that there may be a large variety of rock, all within the same quarry. Different kinds of rock necessarily produce different kinds of lime, and in many cases a manufacturer would not be able to tell a barrel of lime made in his plant if it were not for the label. It can be plainly seen that if the tactics of the cement man were followed, that is if the lime manufacturer were well acquainted with the various qualities of rock in his quarry, through a chemical engineer, and by using so much of one and so much of another so as to make an average for burning, he could not help from getting a very uniform quality of lime and each barrel turned out of a plant would be exactly of the same standard as every other one. Tests of lime have been made and it has been determined that no shipment is the same as other shipments from the same plant, but the careful grading and averaging of rock would guarantee a standard quality at all times. The lime users are swiftly coming to the point where they demand such a product, a brand of lime that is always the same, and the wide-awake manufacturer will meet this need.

Hydrating Proposition a Live One

DULUTH, MINN., February 19.—The Clyde Iron works report that they have sold hydrating machines to the following: White Marble Lime Co., Manistique, Mich.; Luckey Hydrating Co.; George B. Christian, president, Luckey, Ohio; Ft. Scott Hydraulic Cement Association, Ft. Scott, Kan.; and two machines to the Kelley Island Lime and Transport Co. These to be used in modernizing the Dodge plants recently acquired by them, and as soon as they can take up the remodeling of their other plants they will place their order with the Clyde Co. for the balance of the machines necessary to do this.

Much of the success in the hydrating department of the Clyde Co., is due to the work of the well known expert, Mr. Charles C. Kritzer, who has scored a number of successes.

One of Many Plants.

The Duluth plant of the Kelly Island Lime and Transport Co., like the balance of the Kelly Island lime plant, is a well constructed and well equipped plant, but differs from most of the others, in that wood only is burned. The limestone is shipped in from Kelly Island and Marblehead by boat, and store at the plant to be used as needed. The stone is handled to the nine kilns by a vertical elevator arrangement, and wood is brought up on cars to the firing floor in the same manner. Since the kilns are located on the water front, space is an item. For this reason vertical elevators are used, when, if room was available, an incline would probably be used. The fuel used is waste slabs from mills and is soft wood. For this reason, the fireman is kept busy most of the time feeding the



THE DULUTH PLANT OF THE KELLY ISLAND LIME AND TRANSPORT CO.

furnace. Next to the kilns come the heading-up room, and just beyond this the stove mill and barrel factory supplies the barrels for the plants. The stove mill is in charge of Mr. L. G. King. D. W. Ridgewell is superintendent of the lime plant and Mr. D. G. Cutter, vice president, is general manager of the Kelly Island Lime and Transport Co. Mr. Cutter is also a very large dealer in builders' supplies, shipping cement, lime and salt to all parts of the Northwest.

Hydrated Lime in Prepared Plaster Formulæ.

New York, February 18.—Mr. T. W. Cappon, 881 E. 141st Street, has contributed to the *Chemical Engineer*, a very practical article on the above subject. With his permission we append some extracts of more general interest to the average lime manufacturer, while the complete article has other varied matters of information interesting to the chemist and the producer of lime.

A subject of increasing interest, and one at present much discussed among lime manufacturers, is, "Can lime by any change or process be made to take the place of gypsum in hard wall plaster?"

It is generally known that Portland cement can be used with lime to form good "hard plaster," but it is not necessary to tell those who have had experience with it that it will not give the "quick setting" property which is such a convenient feature of the modern "hard plaster," nor can it be used where light colored work is desired.

On the other hand, mixtures of lime and calcined gypsum, will not furnish the high tenacity required unless the gypsum is used to such an extent as to practically displace the hydrated lime whose employment in hard plaster, it is intended to promote.

Amid these apparently conflicting requirements, a solution of the difficulty is found by developing the requisite properties in the lime itself. By working on the magnesite, a constituent of certain kinds of lime known as "dolomite" lime, it is possible to form the oxychloride, which has great cementing power.

This plaster has been applied on a large scale in the cold storage chambers of a large brewery in New York City. The conditions in this case

were about as severe as lime plaster could be subjected to, for the fermenting room of such buildings being kept at a little above the freezing point of water is liable to condense moisture. A cement mainly composed of calcined magnesite, imported at a cost of \$30.00 per ton, had been previously used for this purpose because of its hardness and resistance to moisture. The hardened lime plaster, however, fully answered both requirements and became very hard, and it is in perfect condition; and only on those rooms where the amount of condensation precluded all chance of drying was the expensive "magnesian cement" employed.

The plasterers much preferred the lime cement for its easy spreading qualities, as they were able to cover double the surface with it in a given length of time; furthermore it was found not nearly so liable to crack on drying out as the pure "magnesian cement."

In conclusion it may be asked, "If hydrated lime can be substituted in this way, why has it not been done more generally?" The answer is found in the statement that reluctance to change a long established custom is the principal, but of course not a valid reason; the thing can be done as was testified at the last meeting of the association of lime manufacturers.

Western Lime & Cement Co.

MILWAUKEE, WIS., January 16.—The Western Lime and Cement Co., who are among the largest operators in the Northwest, have a suite of offices in the Pabst building here. They are the largest manufacturers of magnesian white lime in the country and have works at Oshkosh, Clifton, Grenlums, Knowles, Hayton, Brillion, Sherwood, Sheboygan, Eden (Marblehead) Hamilton and Mayville. They have allied houses at Chicago, Oshkosh and St. Paul, but their general office is in this city. Their daily capacity is 7,000 barrels. They are also dealers in domestic and imported cements, stucco, land plaster, plastering hair and fire clay. Mr. Wm. C. Lantry, in speaking of the business, said the past season had been a very good one, that conditions were favorable for a continuance of same as Milwaukee alone was doing considerable in the building line.

Has Been Incorporated.

COLD SPRINGS, O., February 10.—The Strunk-Meyer Lime Co. say that they have had a good year in lime, crushed dolomite and crushed stone, and look forward to a prosperous season. They report that their Cincinnati end of the business is also in a flourishing condition. The company has lately been incorporated with the following officers: Chas. B. Strunk, president; Louise B. Strunk, treasurer; Harry H. Strunk, general manager.

Good Business in Canada.

INNERSKIP, ONTARIO, February 7.—Mr. John Callan, of John Callan & Bros., says, "Prospects are looking bright for this season. We are the only works in Canada making ground lime, and it is taking well now with the builders and plasterers. The price of lime in Ontario is very good; it retails at 20 cents per bushel at the kiln. We have a good plant close to the station on the C. P. Ry. and have a good local trade of 30,000 bushels per year. We have been in business here for forty-five years and would sell out now if we got a good offer. I am much pleased with Rock Products."

Unable to Supply the Demand.

ERIN, TENN., February 18.—Mr. E. W. Rauscher, of Erin, Tenn., is the manufacturer of the well-known Arlington lime. He is at present running three kilns, and his capacity is 350 barrels per day. His plant is located about one mile from the city of Erin on the railroad. Arlington lime is one of the best known brands in the country, and it has always given perfect satisfaction. This is evidenced by the fact that many of their first customers' names can still be found among their largest buyers to-day.

Mr. Rauscher says he has not been able to supply the demand for the past six months, and his business has been very seriously handicapped by the car shortage.

The Lodgers Lime Co. has been organized at Kananaskia, Alberta, Ont., to manufacture and deal in lime and cement. The capital stock is \$100,000, and among those interested are Sir Stanford Fleming, Dr. Hugh A. Fleming and J. S. Irwin, of Ottawa.

A Word About Co-Operation.

HUNTINGTON, IND., January 26.—Believing there is a great future in store for the members of the National Lime Association, Rock Products requested President Martin to address you on the subject, and you can gain food for reflection by reading what he has to say.

I feel it my duty to thank my fellow lime manufacturers who were present at the National Lime Manufacturers' Association meeting, held at Chicago, Ill., as well as all others, for the honor they have bestowed upon me in selecting me as their president. While this was done in my absence, and as I had no chance to decline, I had to accept the office, but I then felt, and feel now, that some one, other than myself, should have been chosen in order that the interest of the National Lime Manufacturers' Association would have been better served.

This is an age of organization, but it is not said that all that is necessary is that we belong to an organization. In order to make the organization a success, we need loyalty of the members, and the influence and co-operation of all lime manufacturers now members of the organization as well as those outside the association. This organization and the members thereof must endure some hardships, as there is no rose without a thorn, and though the horizon may sometimes be cloudy, we will always find a bright star behind the cloud.

We solicit each and every lime manufacturer in this beautiful country to join this grand association, feeling sure that it is well worth membership fee and other little expenses incidental thereto.

The educational points in preparing our products so they are always the best; the economy points as to how to manufacture our product most economically, the point how to market our products, the friendship that has been promoted through the organization and the ill feeling that has been eliminated are a great treasure to all men who come in daily contact with each other.

Now my dear friends, we must expect some difficulties and some unpleasantness which will naturally arise in an organization of this kind. When we meet these conditions we must be cool and calm. We must not allow ourselves to become excited, nor conclude to withdraw from the organization, but must lay our difficulties and complaints before the proper authorities of this organization and you will find that such difficulties will be adjusted satisfactorily to all interested.

It is the intention of this organization to have local organizations formed and to divide the manufacturers into districts as soon as we can employ the proper men to do this work. After this is done we can then consider the interests of the manufacturers as well as the interests of the dealers and consumers, and by being united in this manner we surely can accomplish what we could not accomplish single handed.

Now let us all work for one another, and by so doing our business will be a success as well as that of our competitors. In order to make this organization one of the grandest in this country it is necessary for each and every one of you to assist the officers who are trying to promote your welfare as well as their own, and you may be assured that every spare moment of our time shall be employed in some suitable way for the benefit of their fellow lime manufacturers.

I will now assume the duties of the office and handle the business of the organization with the best judgment the Lord has given me and in accordance with the plans emanating from your executive committee, and any suggestions from a lime manufacturer for the good of the cause will be welcomed.

Car Shortage in Erin.

ERIN, TENN., February 18.—Mr. V. R. Harris is proprietor of the Erin Lime Works, at Erin, Tenn. It is said that this section has one of the richest deposits of limestone there are anywhere in the country, and the lime manufactured here has stood all the tests, and has a reputation second to none. Mr. Harris has five kilns and they are kept busy all the time. He is not confined to any territory, and he frequently ships lime to the furthestmost parts of the country. He has been very unfortunate this spring in not being able to secure sufficient cars for the transportation of his product, as there is but one railroad entering Erin.

Mr. Harris is the proprietor of a tract of land near Danville, Ky., rich in clay deposits, and he will shortly erect a fire brick plant at this point.

Lime Plant Rebuilt.

WINCHESTER, February 12.—The lime plant of the M. J. Grove Lime Co., at Stephens City, which was recently destroyed by fire, has been rebuilt on a much larger scale. There are six big kilns in all, and the plant will give employment to many hands, for whom houses are being built near by the company. Mr. Grove is also erecting a commodious residence for himself at Stephens City.

New Lime Company Incorporated.

TOLEDO, O., February 15.—The Ohio & Western Lime Co., of Toledo, was incorporated to-day at Columbus. The capital stock is \$1,000,000, and the incorporators are W. B. Whitney, F. S. Whitcomb, R. F. Denison, H. J. Crawford, and C. F. Sanders, all of Cleveland. They will begin the manufacture of lime as soon as possible.

Three Companies Consolidate.

ANNISTON, ALA., February 13.—The Anniston Lime and Stone Company of this city is the consolidation of the Comer-Cobb Investment Co., the Tredegar Brown Ore Co., and the Anniston Lime and Stone Co. All have been incorporated under the latter name with J. W. Comer, president; S. P. Kennedy, vice-president and general manager; E. C. Guilmarlin, secretary, and Paul Morrow, general superintendent. The company, which is one of the largest concerns in Alabama, is installing an electric plant and stone crusher at Tredegar and making other improvement about their properties.

Making big improvement.

PITTSFIELD, MASS., February 5.—News comes of the rapid progress of the lime industry at Cheshire, Mass., where the lime works founded by Albert S. and Alfred S. Farnum, in the year 1874, are now under the control of and being greatly enlarged by C. J. Curtin, who also owns large lime interests in New Jersey. Three new quarries have been added and other improvements are in progress.

A Puff From Washington.

WASHINGTON, D. C., February 10.—Knoth & Moler say: "We have been running our kilns to the limit, which is 225 barrels per day. The entire product is sold right here in Washington and our builders recognize the economy in using fresh lime. We intend to take a trip South soon and expect to look over Dr. Wagner's property, which we saw advertised in Rock Products, with a view to locating a plant somewhere in that locality. We get a great deal of useful information from your journal."

To Quarry Limestone.

RICHMOND, VA., January 30.—The Natural Bridge Lime Co. has been organized at Glasgow. Mr. A. T. Mathews is president; R. N. Pollard, secretary and treasurer. The capital of the company is \$25,000. They will quarry limestone and ballast.

New Arkansas Lime Company.

DECATUR, ARK., February 15.—The Hollandia White Lime Co. has been incorporated with a capital stock of \$39,000, by J. H. Reisz, Emil G. A. Avis and Cornelius Avis.

New Texas Industry.

The Vernon Brick Works, of Orange, Tex., have established a lime kiln in connection with their plant. Oyster shells are used instead of limestone for the production of lime, and Mr. J. Mandeville, manager of the plant, says that he knows of no other place in the South where this is done. A quantity of the product will in all probability be used in the yellow pine paper mill, which will be economical through saving of freight rates.

The Sierra & Eastern Railway has been incorporated at Bakersfield. This is looked upon as the first step toward the development of large lime deposits near Searchlight, Nev., with which Mr. C. A. Canfield, of Los Angeles, Cal., will be prominently identified. The new concern has a capital stock of \$250,000, and the directors are Mr. Canfield, H. M. McIntosh, of Chicago; J. A. Chanslor, of San Francisco, and Ida M. Jameson and J. W. Jameson, of Tehachapi.

The Virginia Lime Company has been incorporated at Richmond, Va., with \$5,000 capital stock.

The Marble Lime Co., of Chattanooga, Tenn., has increased its capital stock to \$20,000.00.

The Consolidated Lime Co., of Huntington, Ind., has been purchased by J. B. Palmer, of Ft. Wayne, for \$21,000.00.

E. A. Echols, Huntsville, Ala., 122 S. Gallatin Street, contemplates establishing a plant for the manufacture of lime.

The Jackson Lime and Quarry Co., Jackson, Mo., is erecting a large warehouse. The outlook for the company is very good.

The Standard Lime Co., of Charlestown, W. Va., is making some improvements at its plant. A new quarry will shortly be opened, and the force is being increased.

The Anniston Lime & Stone Co., of Anniston, Ala., are installing an electric plant, and a complete electric equipment for quarrying and handling their rock, at their Rock Springs, Ala., plant.

The United States Lime Co., of Denver, Col., has been organized with a capital stock of \$100,000.00. J. D. Hawkins, O. H. Shoup and J. R. McKinnie, of Colorado Springs, are the incorporators.

The Lucky Hydrated Lime Co., of Marion, Ohio, has been incorporated with a capital stock of \$50,000.00. The incorporators are: George B. Christian, N. B. Eddy, J. F. Dambaugh, J. M. Stern and George B. Christian, Jr.

The Virginia Lime Co. has been organized at Richmond, Va., to manufacture lime and cement. The capital stock is about \$5,000.00, and the officers are: W. E. Carson, president, Riverton; Warner Moore, secretary and treasurer, Richmond.

The Huntington Lime Co., of Salt Lake City, Utah, has been organized with a capital stock of \$10,000.00. The officers are: President and manager, Frank W. Jennings; vice president, C. S. Burton; secretary and treasurer, Hebur M. Wells.

The Snowflake Lime Co., of Mount Pleasant, N. Y., has been incorporated to manufacture lime, etc., with a capital stock of \$5,000.00. Those interested are: Thos. A. Maguire, John F. Maguire, Peter E. Maguire, 870 Girard Avenue, all of New York.

The Bethel and Redding Lime Co., of Bethel, Conn., has been incorporated with a capital stock of \$25,000.00, of which \$12,500.00 has been paid in. Wm. A. Miles, Mount Vernon, N. Y.; H. W. Bates and R. Clifford Grumman, of Bethel, are the incorporators.

The Kelly Island Lime and Transport Co. have bought the plants of the Toledo White Lime Co., who has headquarters at Toledo and plants at Martin, Ohio. These operations will be gone over carefully and put in best possible physical condition. It is understood that they will add eleven new kilns, making about twenty kilns at Martin.

A party of capitalists, hailing from Detroit, Mich., headed by Mr. M. M. Fessenden, have purchased the Ladd Lime Company at Cartersville, Ga. They will remodel the plant and greatly increase its capacity. This is one of the best known lime concerns in this section of the country, and the injection of Northern capital will, doubtless, have the effect of widening their field of operations.

RETSLAKE.

If your lump lime, or your hydrated lime "sets" too quick on the mortar board after having been "gauged," RETSLAKE will make it work COOL and SET SLOW.

RETSLAKE can be incorporated into your "white stuff" when the lump lime is run off, or it may be incorporated into hydrated lime during the hydrating process.

The cost of making your hot working lime work COOL is very slight.

The advantages of having a slow setting lime are many.

Contracts for a term of years will be made with lime manufacturers for the use of RETSLAKE.

Practical demonstrations of the efficiency of this process will be made before negotiations for its use are entered into.

Correspondence solicited.

RETSLAKE COMPANY.

P. O. Box 611,

PITTSBURG, PA.

Cement.

Association Meeting.

The Association of American Portland Cement Manufacturers will hold their quarterly meeting March 13 and 14, at the Bellevue-Stratford Hotel, at Philadelphia. A large attendance is anticipated as important business is to be transacted.

Cement Sculpture.

DOYLESTOWN, PA., February 16.—Mr. William Mercer has discovered a method by which he has made cement statuary in various colors. To make a beautiful thing of an ugly material is not an easy task and cement has the honor of being both the most useful and the most unsightly building material known—ugly because most sands have not sufficient color in themselves to affect that of the cement when mixed with it. This shortcoming of cement has heretofore barred it from any but utilitarian purposes. Though a boon to the architect and engineer, plain to their needs under the water or in the air cement has until now remained an unknown quantity as far as the decorator was concerned.

Mr. Mercer determined to discover if satisfactory variation of color and texture were practicable without impairing cohesiveness and consequently strength. The addition of a variety of coloring pigments to cement, and an accompanying control of the texture of the finished object made of it, has at last been accomplished by this enthusiastic craftsman. For several years special tests have been made in cement castings, although the work has been but little known during the experimental process—until now it is an accomplished art. Mr. Mercer first built several fountain pieces in natural color. Next a pergola was built upon the grounds. This owes its exceedingly decorative character to the addition of marks, vases, urns and tree-tubs. The surfaces of these objects vary greatly in density and smoothness; and as a group they represent a half dozen well chosen tints of color, all perfectly appropriate to material which is by its very nature similar to stone. Innumerable attempts have been made it is true, to manufacture garden ornaments of decorative clay products, and more or less success has been attained, but it remained for a Doylestown resident to accomplish something really worth while in the use of decorative and weather-proof cement work.

Cement in South Africa.

Among the new South African enterprises to attract attention is the manufacture of cement. According to reliable reports, a concern with headquarters near Pretoria is operating with complete success a cement factory which is doing a rushing business. There are other factories in other parts of South Africa, all of them receiving all the encouragement that the local trade can give them.

Some of the first efforts to make cement in South Africa were unsuccessful and the early product, therefore, obtained a bad name. All this seems to be changed now and with the installation of new equipment and skillful supervision at the hands of men well posted on the manufacturing process, the industry now seems to be in a fair way to assume large proportions.

Mr. George E. Nicholson, president of the Kansas Portland Cement Co., of Topeka, Kansas, was elected the president and general manager of the Indian Portland Cement Co., of Neodesha, Kans. Mr. Nicholson also holds the position of president in the Independence (Kan.) Portland Cement Co., Independence, Kansas.

Mr. W. H. Harding has resigned the presidency of the Bonneville Portland Cement Co. to accept the position of general manager of the Coplay Cement Manufacturing Co. He has an office in the Pennsylvania Building, Philadelphia, Pa. Mr. Joseph P. Mack is the new president of the Bonneville Co.

Canadian Cement News.

TORONTO, CANADA, February 13.—The annual meeting of the National Portland Cement Co., of Durham, Ont., was held at Toronto on the 7th inst. and was attended by several hundred shareholders. A very animated discussion took place over the proposition to remove the plant from Durham to Port Colborne, Ont., at which latter point the directors had secured options on properties. The removal was recommended by superintendent Fair on the ground that the supply of good marl at Durham was nearly exhausted. This was contradicted, however, by other expert opinions and the shareholders by a large majority decided against the proposed removal. The directors report showed a net profit for the year of \$4,884.00, or about 8½ per cent. on capital stock, after providing for depreciation of plant. Several of the old directors were retired from the Board. The directors elected being as follows: W. H. Hoyle, M. P. P. Cannington; Gilbert McKechnie, Durham; R. D. McWilliams, Owen Sound; A. F. McLaren, M. P. Stratford; Valentine Katz, M. P. Parkhill; S. F. McKay, Woodstock, and C. W. Dyer, St. Thomas.

The annual meeting of the International Portland Cement Co., of Hull, Que., was held on the 6th inst. Sir Sandford Fleming, president, was in the chair. The report of Mr. J. S. Irvin, managing director, stated that the first five months' operation of the works ending November 30, showed a net earning of 8 per cent. on the total capital. By reason of the installation of new grinding machinery the capacity of the works this year, will be increased over that of 1905, by at least one-third. It was anticipated that the works would soon be able to produce about 2,000 barrels a day. They would then be able to place in storage 140,000 barrels for spring delivery and would be in a position to take large spring contracts. As their materials were rock and clay instead of marl and clay the works could be run just as economically in winter as in the open season. The old officials were re-elected.

The following companies have been incorporated: Re-Inforced Concrete Co., Ltd., Montreal, \$200,000.00, incorporators, Messrs. Donald Lynam, Timothy J. Donoghue, John F. Bethune, Arthur W. Powell and J. L. Goffette. Loders Lime Co., Ltd., Kananaskis, Alberta, \$100,000.00, incorporators, Messrs. Joseph S. Irvin, John S. Cape, Hugh Fleming, Charles H. Gore and Sandford H. Fleming.

Canadian Art. Stone Co., Ltd., Toronto, \$50,000.00, provisional directors Messrs. James E. Murphy, Joseph W. Campbell, Charles H. Badgley, Hugh W. Hogue and Wm. H. Irving.

The Indestructible Brick Co., Ltd., Toronto, \$100,000.00, provisional directors, Messrs. Geo. W. Townsend, Herbert L. Douglas and Charles Wilkinson.

Company Is Financed.

BIRMINGHAM, ALA., February 11.—The deeds and bonds of the Standard Portland Cement Co., which intends erecting and constructing a plant at Leeds have been abstracted and work will soon begin. An initial expenditure of \$500,000.00 will be made, but the eventual expenditure, however, will be about \$1,500,000.00. Mr. Lewis, of Virginia, was in the city this week looking after the arrangements.

New Portland Cement Plant.

JEFFERSONVILLE, IND., February 7.—It is rumored that Chicago capitalists have purchased the plant of the Standard Cement Co., two miles above Charlestown, this county, and will erect a large Portland cement mill. Experts who have been examining the clay and rock formations of that section state plaster will also be manufactured in connection with the Portland cement.

The executive and sales agency offices of the Alma Cement Co. have been moved to Wellston, Ohio. All communications hereafter should be directed to the Wellston office.

The Standard Portland Cement Co., of Charleston, S. C., have recently incorporated with \$125,000.00 capital stock. They will manufacture Portland cement and will have a capacity of 1,000 barrels.

Want a Cement Plant.

We are in receipt of a communication from Mr. H. J. Egly, of Phoenix, Arizona, in which he voices the sentiments of many people in his section, when he says there is a crying need for a cement mill in this locality. He says there is plenty of material at hand for the making of a first grade Portland cement at a very reasonable cost and that the demand is so great that sufficient contracts could be secured in advance to keep the mill running for an indefinite period. He encloses a statement made by Mr. F. L. Warner in which he describes what are without doubt ideal conditions for the manufacture of a high grade Portland cement.

The land is located five miles east of Phoenix, and two and a half miles west of Tempe and nine miles west of Mesa City.

Mr. Warner says: "It is my opinion if a good plant could be built and combining the five articles under one roof, cement, lime, lime brick and plaster de paris, sewerage pipes and besides manufacturing stone, a large business could be established and would pay better than nine out of ten gold mines in this territory and at present is the very best and safest investment at this point (Phoenix) in the United States, as there is a home demand for every article mentioned."

I am informed by a United States Engineer of the reclamation service that if the government would buy the canals, they would need at least fifty thousand barrels of cement to build the head of the Arizona Dam and other points. I heard also another rumor that Mr. Beardsley, who lives at present near Cincinnati, Ohio, would commence finishing the Aqua Fria Dam and would need about fifteen thousand barrels.

Increasing Their Output.

COLTON, CAL., February 19.—The capacity of the California Portland Cement Co.'s large works at Slover Mountain is to be increased fourfold.

The orders for cement have been, for the past year particularly, far in excess of the output, all of the product finding a market in Southern California alone, the company being obliged to refuse outside orders.

At the annual meeting of the company held at Los Angeles, a new board of directors was elected, and a dividend was declared. The directors, who are mostly residents of Los Angeles, are: Dan Murphy, president; G. E. Bittenger, vice president; T. J. Fleming, secretary and treasurer and general manager; W. H. Stinson, Robert Eason, E. W. Gilmore, W. H. Avery.

"We expect to expend over a quarter of a million dollars in enlarging the works," said Manager J. T. Fleming.

Soon to Begin Operations.

CALEDONIA, N. Y., February 10.—Repairs are about finished at the Iroquois Portland Cement Co.'s plant and the dryer are now running. As soon as the bins are filled the burners will be started and then the tube and ball mills, so that the entire mill will be running full force again.

Will be a Record Breaker.

ST. PAUL, MINN., February 10.—Mr. M. F. Roche says every indication points to boom times in the cement line for this year. The cement market is stiff and prices ruling higher throughout the entire northwest. It now looks as if 1906 will be a record breaker.

New Cement Company.

FORT DODGE, IOWA, February 20.—March 1 has been set as the time when the articles of incorporation for the Iowa Cement Co., of Mason City will be filed and the work of construction started on the plant. Several changes in the original plans have been made and all of them have been with a view of enlarging the plant. The several buildings as now planned will cover a space of four acres.

All of the machinery has been ordered and is expected to begin arriving so that work can be started on the date above named. The plant will be operated by electricity. The capacity of the plant will be 1,500 barrels at the beginning. Mr. E. J. Breen is one of the promoters.

Conditions in Arizona.

PHOENIX, ARIZONA, January 13.—It is always of interest to hear what the practical man has to say, and consequently the remarks of M. L. Vieux, the leading concrete contractor in Arizona, regarding the situation out in this western country ought to cause the Portland cement manufacturers everywhere to sit up and take notice. Mr. Vieux is a man of wide experience in all sorts of concrete work, having engaged in it in Southern California, Old Mexico and for the last fourteen years in Arizona, where he has succeeded in nailing most of the big contracts in the Territory.

Eastern cement never finds its way to Arizona because of prohibitive freight rates. The domestic cement used here comes from California, Colorado or Kansas and Mr. Vieux thinks that because of peculiar climatic conditions it is not as satisfactory for concrete work as the imported article. He believes the domestic cement contains an excess of lime which causes it to expand more readily under the fierce heat of the summer sun. The thermometer in Phoenix often goes to 120 degrees in the shade. All the sidewalks in the city are made from English or German cement. Mr. Vieux has never handled any of the American cement from the east and does not know how it would compare with the foreign cements.

It seems strange that Portland cement from England and Germany can make the long voyage around Cape Horn and yet be sold in Arizona for less than what cement from Pennsylvania would bring. This is of course partly explained by the fact that it is carried as ballast by many of the steamers and sailing vessels engaged in trade of conveying to Europe her wheat supply from the Pacific Coast.

Mr. Vieux claims that Gillihan's English cement is sold in England at a profit at 90 cents a barrel. In Old Mexico he has used it at \$1.75 a barrel. At points in California it is \$2.75 a barrel. Multi-millionaire Spreckles is sole agent in America for the Gillihan cement and according to Mr. Vieux's notions his rake off amounts to just \$1.00 a barrel, accounting for the difference in the price of the cement in Mexico and the United States. The American agent for the German cement is not in the business for his health either and the cost of that article to consumer in this country is the same as that of the English.

The distance from the port of San Pedro, Cal., to Phoenix is 550 miles and the freight for that distance on a barrel of cement is \$2.25. Foreign cement retails in the Phoenix market for \$7.00 a barrel.

The Statehood, whether separate or in connection with New Mexico is looked forward to as a check upon the present charge-what-we-please policy of the western railroads. It seems that while Congress is in the mood to remedy some of the railroad rate abuses the Portland cement manufacturers of the East might do worse, than to call the attention of the Nation's lawmakers to the conditions that absolutely shut eastern cement out of a territory where it ought to find abundant sales.

The United States Government is making Portland cement at Roosevelt, Arizona, at a total cost of \$2.00 a barrel and government experts assert that it compares favorably with other American cements. However, contractors and practical men out here are skeptical and take the position that time alone will demonstrate whether the Roosevelt Cement is what Uncle Sam's agents say it is, because the works where it has been employed have not stood long enough to afford a practical test.

Because of the high price of cement, there is little concrete work done in Arizona. A hollow block concern was started several months ago in Phoenix and in three months had dropped just \$5,000.00. However, the failure was in part due to the inexperience of the men engaged in the enterprise, who started in with the idea that they could compete with brick. Mr. Vieux recently bought the plant for a mere song and it is probable that his experience will enable him to run it to an advantage.

There are miles upon miles of irrigating ditches in Arizona which by absorption cause the loss of thousands of gallons of the precious water upon which the crops of the country depend. Could cement be got into the territory at a reasonable

price all these ditches would be made concrete waterways. But as the matter now stands even Phoenix, the capital city is a town practically without even concrete walks except in the business part and for a short distance out one side of Washington Street, the main thoroughfare.

Mr. H. L. Shock has resigned the vice presidency of the Empire Portland Cement Co.

Mr. Irving A. Bachman has been elected president of the Standard Portland Cement Co., succeeding Mr. W. G. Henshaw.

Mr. David Trainer has been elected president and general manager of the Alma Cement Company succeeding Mr. B. B. Lathbury.

The Niagara Cement Co., of Buffalo, N. Y., has arranged for the installation of a concrete manufacturing plant, which will cost about \$33,000.00.

The Newaygo Portland Cement Co., report that they are pretty busy with orders and that business never was so good at this time of the year as now.

The Portland Cement Co., at Dunkirk, N. Y., is preparing to do a big business. A large building is in the process of erection and will be enlarged in the spring Mr. Corell was in Buffalo recently and purchased a new machine.

The Wisconsin Portland Cement Co., organized at Portage, Wis., with a capital stock of \$400,000.00 largely subscribed by Wisconsin and Milwaukee men will develop the extensive marl beds in the vicinity of Portage.

Among the new industries to be established in Mexico is an extensive cement factory at Hidalgo, on the Mexican International, twenty-eight miles north of Monterey, by Mr. Spackman. Two hundred cars of machinery is said to be destined for the installation of the plant.

The Elk Cement and Lime Co., of Elk Rapids, Mich., say they are making necessary repairs, intending to begin the manufacture of cement March 1. They will have a capacity of 550 barrels per day. They use a dry process using limestone and clay. Additional kilns will be installed in the spring.

Mr. Herman Besser succeeds Mr. Patrick Culligan as president of the Alpena Portland Cement Co., Mr. George B. Holmes succeeds Mr. C. H. Reynolds as vice president, Mr. Reynolds being appointed secretary, succeeding Mr. John Monaghan, who is sales manager, formerly being secretary and sales manager.

The Kansas City Portland Cement Co. will enlarge their plant during the coming season. They now have a capacity of 1,200 barrels and by the introduction of new equipment and machinery this will be increased to 1,600 barrels daily. This will make it one of the best cement plants west of the Mississippi River.

The Associated Portland Cement Manufacturers, Ltd., London, are distributing a sixteen page pamphlet entitled "A Modern Danger," being a description of Portland cement and natural cement. It seems that the Belgian manufacturers of natural cement ship large quantities of their product to England, marking it as "Best Portland Cement."

The American Cement, Lime and Stone Co., has just been organized at Martinsburg, W. Va. It is incorporated under the laws of the State of West Virginia with \$500,000.00 capital for the purpose of manufacturing Portland cement, lime, shipping fluxing stone ballast, etc. Mr. Fred A. Wright is the general manager, H. E. Brown, B. S. will have charge of the cement department and S. W. Shoop, the well-known engineer, will be the lime man.

Mr. W. E. Austin is managing the general Southern offices, located at Atlanta, Ga., of the Power and Mining Machinery Co., Cudahy, Wis., and pushing their line of McCully gyratory crushers, mining machinery, cement machinery, sand-lime brick machinery, American-Crossley gas engines and Loomis-Pettibone gas generators.

W. E. Austin & Co.'s business in Atlanta, continues to be managed by Mr. S. T. Grimshaw, who is a thoroughly competent engineer, and capable of designing special plants for contractors in concrete making machinery, etc.

Clay.

Two Successful Conventions.

The conventions of the National Brick Manufacturers' Association and the American Ceramic Society, at the Continental Hotel, Philadelphia, Pa., during the past week, were in every way successful. The attendance at both meetings was quite large many papers were discussed. The educational and social feature were such as to make the whole affair one long to be remembered.

Big Plant for Vitrified Brick and Sewer Pipe.

ALBION, ILL., February 16.—Within a short time the Edwards Vitrified Brick and Sewer Pipe Co., located here, will erect a large plant for the manufacture of vitrified brick and sewer pipe. This organization is a new one, having only recently been incorporated with a capital stock of \$50,000.00. The capacity of the proposed plant will be 30,000 paving brick daily and a large output of sewer pipe. The company has purchased a large tract of valuable shale land, and has options on other land, which is said to be equally good for the purposes of the company's needs. The deposits are practically inexhaustible. The officers are G. C. Ziegler, president, and G. F. Martin, superintendent.

To Erect New Fire Brick Plant.

ALBANY, N. Y., February 17.—The Western Fire Brick Co., of this city, has increased its capital stock from \$100,000.00 to \$350,000.00 for the purpose of erecting a new plant. This company has been in operation for a number of years during which time it has steadily grown. About two years ago the concern was re-organized, and in the past year the industry has made notable progress, hence the need of a more commodious plant. The present force employed is about 100 hands, but with a new plant this will be increased to more than 250 well trained operators. There is one difficulty to be overcome, however, and that is whether the company can secure a suitable site in this locality. There is some doubt about this, in the event that such is not possible the company will remove its plant to New Jersey. As the prospects for the company's future are very bright, it is to be hoped that this difficulty can be surmounted.

Awarded Large Contract.

ASHLAND, KY., February 9.—The Ashland Fire Brick Co., writes us: "This company has just been awarded the contract for supplying all the brick necessary to the erection of the new cement mill at Independence, Kas. We consider this quite a recommendation owing to the fact that a great many brick companies from the "Western district," who have a much less freight rate were bidding on this material."

Concern to Erect Plant in the West.

LITTLE ROCK, ARK., February 15.—A large organization which owns valuable clay deposits in Saline County, Ark., known as the Arkansas Soapstone and Refractories Manufacturing Co., contemplates the erection of a plant here for the manufacture of fire brick. The deposits are some distance from any railroad, but arrangements can be made whereby the clay will be transported to this city. Representatives of the company recently visited this city for the purpose of arranging matters.

The Horatio Fire and Building Brick Manufacturing Co., has been organized at Oklahoma City, Okla. Ter., with a capital stock of \$100,000.00.

The Oliver Hill Fire Brick Co., of Augusta, Me., has been organized to operate lands for brick, etc. The capital stock is \$150,000.00. The officers are: Fred Bogue, president, W. S. Lee, treasurer.

The Western Fire Brick and Cement Co., of Brazil, Ind., has been organized with a capital stock of \$1,000.00. Lewis McNutt, Blair McNutt and Charles McConnell, are the incorporators.

Concrete

Observations By a Subscriber.

One of our subscribers says: "The average person who enters the concrete field has very little, if any, knowledge of the nature of cement or its possibilities except what he can learn from the printed matter of the different block machine vendors and a few manufacturers. The average pamphlet is very misleading, and the result is that the block-maker gets started with the cart before the horse, and consequently gets stalled before he gets fairly started. In nine cases out of ten, however, he will pull out and will learn from actual experience and study that there is a good legitimate profit and a permanent, growing business ahead of him if he makes a good product."

"Some purchase territorial rights, and so-called 'exclusive rights' which do not exclude, for which they pay fancy prices. After their machine arrives, they find only a mould that is very crude, coming from some foundry that is in no way interested save to collect three cents per pound for rough castings from the so-called patentees of the machine. We are thankful that the day of the patent right graft, so far as cement moulding machinery is concerned, is gone by. The time is not far distant when the best class of buildings will be built of cement, not because it is cheap, but because it is durable and attractive. Better and more slightly buildings are what is wanted, and

the machine manufacturers that build their machines to cover any and all classes of work in a perfect manner are those who will survive.

"The average cement block building looks crude. The architecture is poor on account of the limited capacity and adjustment of machines.

"A few pointers before you purchase machinery. Pay no attention to the flowery claims made by the different machine companies. There is a good opening in every town that is growing for a cement block plant. Don't buy territory or patent rights if you are going into the cement stone business. Purchase the best machines after a careful investigation. Make a high class cement stone. Don't let your motto be 'How cheap,' but rather, 'How good.'

"Buy the machine that covers the greatest range of work, and one that is accurate. Mix and mould your materials properly and the cement stone business will be found a profitable and growing business."

Concrete to Be Used in Egypt.

Some archaeologists maintain that the mighty pyramids of Egypt were constructed of moulded stone made by a process long forgotten by the people of that historical country. It is certain that the pyramids represent a type of construction hard to equal and almost impossible to excel. Since the building of these mighty landmarks however, Egypt has accomplished very little of merit in the building line. Building stone construction costs about \$10.00 per cubic foot there, about twenty times as much as here, while lumber is also very expensive, and perhaps this is the greatest handicap to Egyptian architecture. The high cost of stone and lumber tends to prove that the pyramids are of cement construction and that the people of that country would again become renowned as builders if the lost art of concrete construction was restored to them.

This is just what is to be done. Mr. John F.



C. A. P. TURNER, PRESIDENT NORTHWESTERN CEMENT USERS CONVENTION, MINNEAPOLIS, MINN.

Hickey, a capitalist of London, England, has been carefully examining the machines for making stone in England and this country with the idea of shipping suitable ones to Cairo, Egypt, where his company, the Desert Bungalows and Hotel Syndicate of Egypt, will use them in erecting bungalows throughout the country to meet the requirements of winter in the Nile country.

The Fisher Hydraulic Stone and Machinery Co., of Baltimore, are to be congratulated upon receiving the contract from Mr. Hickey to supply his firm with the necessary outfits for this work. Mr. Hickey visited Baltimore because he hoped to find in that city the latest modes of construction which were used in the rebuilding of the large burnt districts, after the recent fire, and while in the city completed his arrangements for machinery. After signing the contract the buyer said:

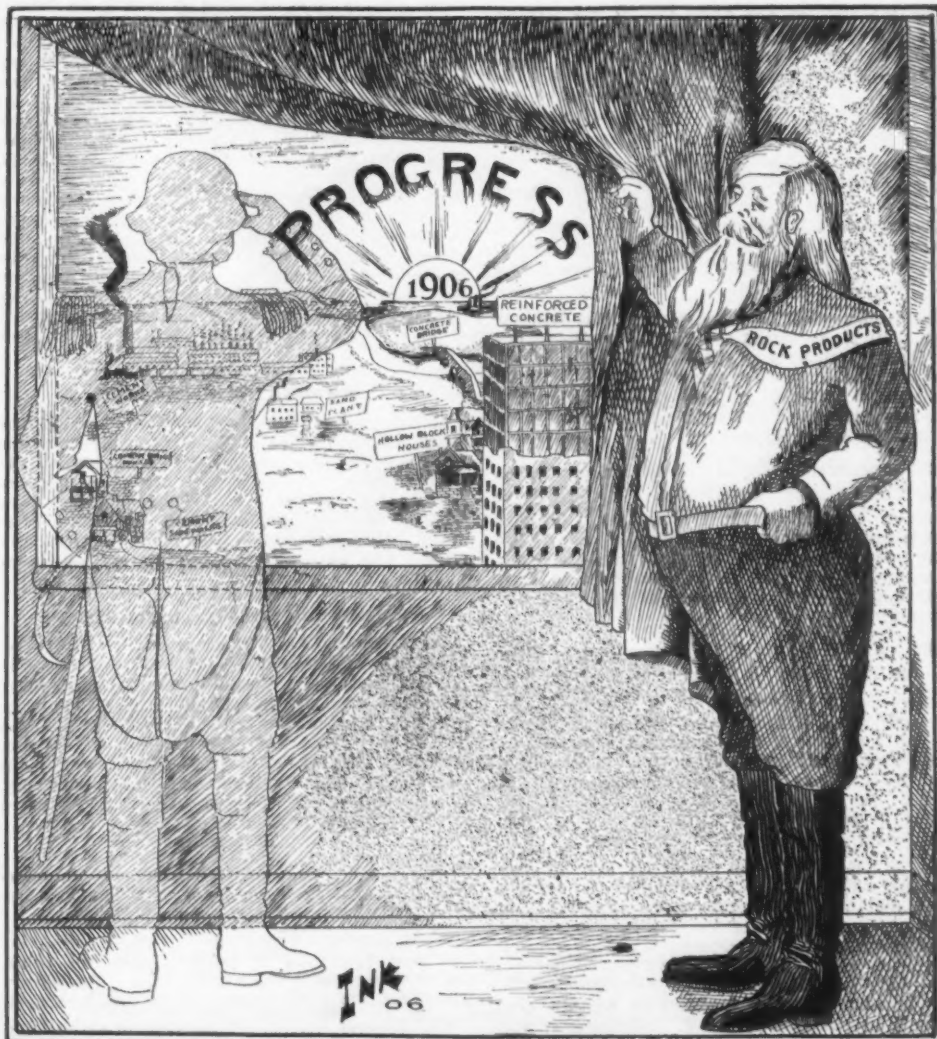
"Although my firm had intended only to go into the building of bungalows, I shall now make a bid for furnishing the curbstones and the material for all sorts of structures. The buildings which I see along Cheapside and other streets in Baltimore constructed from the artificial stone show me what wonderful things can be done with it. The immense cost of natural stone, which has to be carried for such great distance to the cities of Egypt, makes a cheap artificial stone all the more desirable."

Concrete Favored in Canada.

The wonderful growth of the concrete industry in Canada, especially Western Ontario and Western Canada, is indeed gratifying, while the great strides of the hollow block into public favor is astonishing. It is said that there are about forty concerns in and around London engaged in the manufacture of blocks and they can not make them fast enough to meet the demand. The bricklayers of Canada who were at first disposed to ignore the concrete block have changed their opinion in regard to its merits and are now assisting in the promotion of its popularity, some of them manufacturing blocks during the winter months when the weather prevents bricklaying and building.

New Concrete Plant.

RUTLAND, Vt., February 14.—Rutland is soon to have a new industry. W. E. Patch, of Akron, N. Y., brother of President F. R. Patch, of the Patch Manufacturing Co., has purchased of N. M. Burr the farm south of Rutland, which contains a sand field of six acres, and will soon build a plant on it for the manufacture of cement building blocks. Mr. Patch conducts a similar business at Akron, and proposes to employ at least fifty men in Rutland. The Burr sand pit is the most valuable in that part of Vermont. A few years ago Mr. Burr bought it for \$3,500.00, and the sale price was \$7,000.00. During the last two years he has sold on an average of 200 loads of sand a month to local factories at \$1.00 a load.



SHADE OF WASHINGTON: "THE CEMENT AGE, BY GEORGE!"

Newly Constructed Pollasky Bridge.

The greatest piece of cement work ever attempted on the Pacific Coast is the building of Pollasky bridge, spanning the San Joaquin river, which strenuous stream forms the boundary line between Madera and Fresno Counties, California. This great concrete structure has been several months in course of construction, and has just been completed and formally thrown open to traffic.

The Pollasky bridge enjoys the distinction of being one of the longest, if not the longest, concrete bridge in the United States. Work of construction was commenced early during last August, and was pushed with all possible vigor and the finishing touches were given January 6, 1906.

The total cost of the bridge approximated \$50,000.00 in round numbers, and each county equally interested (Madera and Fresno) defraying one-half of the expense. J. B. Leonard, architect, of San Francisco, prepared all the plans for the bridge, while all the work of construction was done by the Pacific Construction Co., one of the largest contracting firms of San Francisco. The Worswick Street Paving Co., of Fresno, were sub-let the contract for sand and gravel, and for mixing and placing the concrete.

Sand and gravel taken from the river bed were used in making the concrete, they being mixed with Golden Gate cement made by the Pacific Portland Cement Co. All of the concrete used was thoroughly tested, and proved of very superior quality. The entire work was done under the personal supervision of F. B. Field, who represented the Pacific Construction Co.

There are ten spans in the bridge, each seventy-five feet long. Including the approaches, the structure is over 800 feet in length. Heavy end abutments and wing walls were extended into the natural bank at each end. The abutments are heavy walls placed directly on the bed rock, without piling, and they, as well as the wing walls, are reinforced with corrugated bars. The same reinforcements are used in the main structure.

There is 18 feet (in the clear) of roadway for the passage of vehicles.

The roadway is of earth—the wearing surface being the same as an earth road, having no planks to bump over, and make a loud rumbling.

Most of the foundation work was done during the lowest stage of the river. The pier foundations consist of 33 black heart redwood piles to each pier—each pile being 12 inches square. These piles were "shod" with heavy solid steel "shoes," and driven to bed rock with a hammer weighing 3,800 pounds.

The materials were stored at the east end of the bridge on the natural bank. The mixing was done by an automatic mixer, the concrete being delivered to points required in mixing cars, operated over a double service track—built as the work progressed.

The weight of this structure was about 300 pounds per square foot. To carry this heavy load safely during construction, specially heavy false work was necessary. The filling for the roadway is from the river gravel which was delivered into hoppers near the center of the bridge and carried up by means of bucket elevators, and thence distributed by dump cars over the service tracks.

The arch rings of the spans are reinforced by two layers of corrugated bars, the bars crossing each other and being securely wired at all crossings. The spandrel walls are 9 inches thick at the top,

and 12 inches at the bottom, and may be considered light were it not that they are reinforced by an elaborate system of $\frac{1}{2}$ inch corrugated bars and braced and anchored to the arch wings with buttress walls, again reinforced.

In the wall proper, horizontal rods are spaced six inches apart at the bottom and 12 inches apart at the top, and all vertical rods 2 feet apart, with their lower ends penetrating into the arch ring concrete.

Expansion joints were put in over each pier to guard against cracking from changes in the temperature. This was done by the introduction of a

sheet of heavy tarred paper into the concrete, and special buttress walls were built on either side of these joints, which securely braced and anchored the walls at these points thus broken. Three 4 inch pipes were provided at each pier for drainage from the roadway.

This new concrete roadway bridge is the largest and most expensive of its kind ever constructed west of the Rocky Mountains. It spans the San Joaquin river, one of the largest streams in California, and connects the two large and rich counties of Fresno and Madera. The bridge has been very carefully examined by the authorities of these counties, and engineer experts, and accepted. Many engineers pronounce the concrete work unsurpassed in the United States.

Blocks By the Wholesale.

On this page is printed a remarkable view of interest to the block fraternity. In the picture is shown a pile of 50,000 concrete building blocks which are to be used in the construction of a new power plant for the Twin City Rapid Transit Co., located midway between St. Paul and Minneapolis, Minn. This by no means represents the entire number of blocks to be used in the buildings as the total number will be 600,000. All of these are being made by the contractors upon the work who make the blocks at the scene of building and use the Perfection Power Block Machine, manufactured by the Perfection Block Machine Co., of Minneapolis, Minn. The Transit Co.'s plant is one of the most important pieces of cement construction now under way and will be of interest to every cement user in the country. Mr. M. K. Sawyer, the Northwest manager of the Perfection Block Machine Co., visited our office last week. He is on an extended business trip which will doubtless consume over two weeks.



CONCRETE BLOCKS USED IN TWIN CITY RAPID TRANSIT CO.'S POWER PLANT.

One of the New Machines.

The Excelsior Block Machine is the name of one of the newest propositions to be put on the market. It has many points to recommend it. One of the main points of superiority is the ease with which it can be adjusted to make any size block, hollow or solid, needed in the construction of a modern dwelling. Another noteworthy feature of this machine is that in making plain stone, such as window and door sills, window caps, etc., wooden face plates can be used and as good results obtained as with iron, thus saving considerable in expense. The machine is durable, the frame being made of angle iron and steel. There is absolutely nothing to get out of order or break. In fact it is too simple to get out of order, too strong to break, and if given even ordinary care, will last a life time. Another important feature is the natural rock effect given the stone made on the Excelsior. Realizing the importance of the stone looking as natural as possible, no money has been spared to obtain that result. They claim for this machine, rapidity of action, simplicity of construction, durability and efficiency of operation. The hand labor required in the operation has been reduced to a minimum and any one contemplating purchasing a machine will find it to their advantage to investigate this machine. This is a face down machine and the many earnest advocates of this style of machine claim that it is a distinct advantage as it enables the block manufacturer to face his blocks with a finer material. This enables him to use a coarser material for making the backing which, when fairly wet and well tamped makes a waterproof block.

It will make blocks from 4 to 48 inches in length and 4 to 12 inches in width. It requires no technical skill to manipulate this machine as the mold fits easily and accurately into position, thus insuring clean, hard and sharp corners, and making the blocks geometrically true in all their angles. Next month Rock Products will present a picture of one of these machines, the photo being received too late to get it in this issue. The machine is sold by the Excelsior Manufacturing Co., of Excelsior Springs, Mo., but the factory is located at 419 West Fifth Street, Kansas City.

New Company Incorporated.

SOUTH BEND, IND., February 16.—The Edmondson Concrete Machinery Co., with a capital stock of \$50,000.00 was incorporated last week. The directors are: Robert Edmondson, Richard G. Raliback, Joseph W. Wiley, William Clem and Harry Eager.

Mr. Charles R. Miller is a contractor and dealer in granolithic pavements, asbestos and magnesia pipe and boiler coverings in Memphis, Tenn. Mr. Miller's principal business is building concrete sidewalks, and there have been but few days during the past winter when he has been compelled to quit operations.



THE POLLASKY CONCRETE BRIDGE, ON CALIFORNIA, IN COURSE OF CONSTRUCTION.

Some Interesting Tests.

The following is a report of tests on concrete blocks and sills made for the Hotchkiss Concrete Stone Co., Chicago, Ill.:

Test 1.—April 5.

Crushing.

Surface crushed $7\frac{7}{8}$ by $2\frac{11}{16}$ or 20.5 sq. in.

Height of block?

Maximum load carried, 62,300 pounds.

Average load per sq. in. under maximum, 62,300/20.5 or 3,040 pounds.

Test 2.—April 5.

Crushing.

Surface crushed, $7\frac{1}{2}$ by $3\frac{1}{8}$ or 23.4 sq. in.

Height of block?

Maximum load carried, 58,200 pounds.

Average load per sq. in. under maximum, 58,200/23.4 or 2,490 pounds.

Test 3.—April 5.

Crushing.

Surface crushed, $7\frac{7}{8}$ by $3\frac{1}{16}$ or 22.3 sq. in.

Height of block?

Maximum load carried, 30,200 pounds.

Average load per sq. in. under maximum, 30,200/22.3 or 1,350 pounds.

Note.—This specimen imperfect—high on corners—and edges—hence uneven pressure.

Test 4.—April 18.

Flexure—Sill.

Beam, 4 ft. long, 7 in. wide, 4 in. high.

Supports at one end, 3 ft. 6 in. apart.

Load in middle.

Load carried, 920 pounds.

Modulus of rupture, 517 pounds per sq. in.

Test 5.—April 18.

Flexure.

Specimen duplicate, setting same as above.

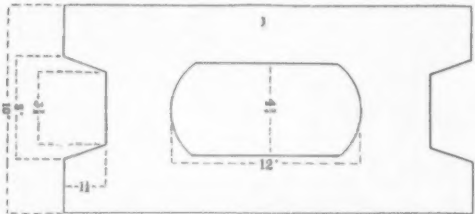
Load at middle, 945 pounds.

Modulus of rupture, 531 pounds sq. in.

Test 6.—April 18.

Flexure.

Specimen, one of halves of specimen of test 1 or 5.



SKETCH OF BLOCK EXPLAINING TEST MADE FOR HOTCHKISS CONCRETE STONE CO.

Supports $9\frac{1}{2}$ in. apart.

Load carried at middle, 4,000 pounds.

Modulus of rupture, 507 pounds sq. in.

Test 7.—April 18.

Crushing—Building block.

Sketch of section of block.

Surface crushed, 135 sq. in.

Maximum load carried, 158,000 pounds.

Average load per sq. in. under maximum, 158,000/135 or 1,170 pounds sq. in.

The "mortar joints" showed failure at 150,000 pounds.

Test 8.—April 18.

Crushing—Block from one of above sills.

Surface crushed, 7 by 8 or 42 sq. in.

Height of block, 4 in.

Maximum load carried, 136,000 pounds.

Average load sq. in. under maximum, 136,000/42 or 3,240 pounds.

Tests are given in the order in which they were made.

All loads given are maximum loads.

Tests were made on the 200,000 Olsen testing machine at the Lewis Institute of Technology, Chicago, Ill., April 20, 1905, the originals being duly signed and sworn to by Professors D. Hector Trowbridge, department of chemistry, and Alex W. Moseley, department of engineering. The specimens were ninety days old at the date of first test.

The Westwood Concrete Block Co. has been organized to manufacture cement, building block, etc., at Westwood, N. J. Capital stock is \$10,000.00. The incorporators are: John B. Speth, Joseph Cooper, and A. B. Bogert.

McNulty Bros., of New York City, have organized a company with a capital stock of \$100,000.00 to manufacture artificial marble. The directors are: P. H. McNulty, E. J. Foley and W. Butler, of New York.

New Building Laws.

COLUMBUS, OHIO, February 16.—Mr. William H. Phillips, of Columbus, Ohio, says that the building inspector of Columbus is preparing some laws to regulate concrete construction work in that city. Quite a number of the small dealers and manufacturers are already up in arms at the restrictions and regulations which they anticipate will have the effect of practically putting them out of business. However, the restrictions can not but help the large manufacturer and place him on a footing where he belongs. It will have the effect also of establishing public confidence in the enterprise and placing the industry on a sound footing. Building laws when not too strict, always benefit a community, and from what Mr. Phillips says about the situation there was very urgent need for some kind of regulations. Especially was this so in regard to the manufacture of building blocks, for nowhere is the temptation quite so strong to try to make blocks out of poor materials. This would eventually ruin the industry and the sooner the cities all over the country take some cognizance of these existing evils, the sooner the building block industry will take its proper place where it rightfully belongs.

Milwaukee and other cities have enacted building laws covering these subjects, and the day is not far distant when every city in the country will realize the importance of some kind of restrictions. This will have the effect of putting some of the small fry out of business, but as the great majority of this class know absolutely nothing about the properties and values of cement it will be the best thing for the industry in general and will establish public confidence in the business, something which, we are sorry to say, is sadly lacking in some communities, owing to the many failures of the so-called building block manufacturers.

Reinforced Concrete Frame.

LOS ANGELES, CAL., February 11.—There is now in active course of construction in Los Angeles, a large building, the frame of which is composed entirely of strongly reinforced concrete. The structure will be used when finished, as a first class hotel that will be known as the "Hotel Haywards."

The buildings is to be nine stories high—and 82x109 feet. All the "timbers" are of concrete of a very superior quality, and well reinforced with steel. The exterior walls are to be of block concrete, fashioned so as to bear a close resemblance to the natural stone. The front of the hotel will be of handsome design and finish. The roofing will be of red clay tiling. This is the first building of any magnitude whose frame consists entirely of reinforced concrete, that has yet been built in California—or, on the Coast.

Messrs. C. Leonardt & Co., the well known concrete contractors of Los Angeles, are the builders, and they are doing a fine piece of work. The new hotel will not be ready for occupancy before the middle of next summer. It will be one of the handsomest hotel structures in Los Angeles.

In Southern California as well as in San Francisco, owners, builders and contractors are rapidly "falling into line" regarding the practicability as well as the economy of using concrete as a building material. The popularity of this material is constantly growing, and the field of its usefulness widening.



NEW HAYWARD HOTEL AT LOS ANGELES, CAL., OF REINFORCED CONCRETE CONSTRUCTION.

Stone From Wood and Magnesia.

What is known as wood-stone is one of the new articles manufactured in England. The component parts are calcined magnesia reduced to a powder, and wood sawdust, which are mixed thoroughly by the wet method. This mixture is tamped and ground, afterwards being compressed, at first slowly with light pressure in a preparatory press, afterwards for eight consecutive hours in a machine capable of developing three and one-half pounds pressure. After this operation the product is subjected to the action of the hydraulic press. These woodstones are incombustible, water proof, capable of taking a polish, making them particularly admirable for ornamentation on structures.

Handsome Concrete Depot.

SAN FRANCISCO, CAL., February 12.—Concrete bids fair to become a favorite structural material among the several large Pacific Coast Transcontinental railroad systems. Already this material has been extensively employed in the construction of abutments for many large railroad bridges; also in the building of tunnels, culverts, etc. Within the past few years, several large and handsome depot structures have been built in California by the Santa Fe and Southern Pacific companies. More are being projected, and concrete gives promise of largely supplanting natural stone, or brick in California and other Pacific Coast States. It is more economical, just as durable, and fireproof as the other material mentioned.

Very recently a new and handsome concrete depot was built at Santa Barbara, Cal., at a total cost of about \$25,000.00 to the Southern Pacific Co. Concrete (some of it reinforced) was used entirely in constructing the walls of the main building. The floors are also of concrete; and the roofing of handsome red clay tiles, the interior furnishings being of marble and oak.

The general architectural type is that of the old Spanish missions—a style very prevalent through-



HANDSOME CONCRETE DEPOT—MISSION STYLE OF ARCHITECTURE—AT SANTA BARBARA, CAL.

out Southern California. The effect, though somewhat quaint, is handsome, and the structure strikes the eye quite pleasantly. This new concrete depot is one of the best appointed buildings of the kind in Southern California.

Concrete Buildings in Washington.

WASHINGTON, D. C., February 14.—Three houses are to be built of hollow concrete blocks on Girard Street, between Fourteenth and Fifteenth Streets, Northwest. This material is unique in the building world of Washington, and if it does the things claimed for it by the Palmer-Brouner Construction Co., which will build the houses, it may bring about a revolution in material used in Washington structures. H. S. Palmer, president of the company, is the inventor of the machine with which the hollow concrete blocks are made. The machine is operated at the site of the building operations, thus making possible a considerable saving in cost.

As an example of what results can be attained through use of the hollow concrete blocks, the three houses to be built by the Palmer-Brouner Co. will be sold for about \$8,000.00.

The houses will be three stories in height, and will each contain nine rooms, two baths and a large reception hall. There will be a handsome stairway and a spacious bay window in the parlor and front bedrooms. All modern improvements are to be installed and the houses will be strictly up-to-date in every particular.

The Thomas Cement Co. was incorporated for \$5,000.00 for the purpose of manufacturing and selling cement blocks, cement bricks and all kinds of concrete work. Their office will be at Gowanda, N. Y. The directors for the first year are: Messrs. Everett J. Thompson, David Nagle and Oliver B. Van Deusen.

New Building Material.

PITTSBURG, PA., February 17.—Pittsburg again comes to the front with a new industry which has heretofore been unheard of in the way of manufacturing what is known as a fire proofing material for building purposes, which is composed of cement, furnace slag and other hard material. It is the invention of C. F. Buente, who is president of the Standard Building Construction Co. The capitalization of the company has been increased to \$600,000.00, and an option has been secured on a ten-acre plot of ground on Neville Island. In addition to the manufacture of the new material the company will manufacture roofing, tile and building stone. The company has a large plant for the manufacture of stone in Toronto, Canada.

The deal for the land will be closed in a few days and plans for three of the buildings have been completed by T. Gjertson, engineer of the company. These buildings will be 300 feet in length by 60 feet wide and will be completed and ready for operation by the middle of April, while the other plants for the manufacture of fire proofing and the roofing will be completed early in June. The company will be in connection with the Pennsylvania and the Pittsburg and Lake Erie railroads, and will also have the advantage of transporting their products by river.

The manufacture of the fire proofing is the first step in solving the forestry problem, which has been confronting the people of this section and other Eastern States for a number of years, as the material will be cheap enough to be used in dwellings, and will take the place of wood, concrete and brick. The material will be made in sections and will be in lengths and widths to suit the purchaser and to fit the building, and will be strengthened by iron and steel.

The company will also manufacture curbstones, flagstone, cement paving and other cement materials, thus doing the work in the factory instead of having it done at the building.

Among the large stockholders of the company are: D. W. Bell, secretary and treasurer; George Miller, of William Miller & Son; Robert Cochran, James Melville, James Murphy, William Hasley, John R. Hastings, all of whom are builders, and a number of others are now arranging to take stock in the new enterprise.

Making a Smaller Machine.

KANSAS CITY, KAN., February 10.—Mr. W. M. Davis, of 828 Sandusky Avenue is the inventor of the Davis concrete cement machine, which has been on the market for some time. He is now making a small machine which will sell for very little money in comparison with the majority of machines on the market, and it is claimed by the inventor that he can do just as good work with one of his small outfits as he can with a large machine. He is not ready to place this small machine on the market as yet but will have some of them ready for spring delivery. Mr. Davis' brother has an artificial stone plant at 839 State Avenue, where he manufactures steps, coping, porch columns, etc. He has made quite a success of his business and uses his brother's machine and molds in making his cement products.

Has Plenty of Work.

LYNDONVILLE, KY., February 15.—Mr. Thos. H. Nie says: "I am making concrete blocks and have a veranda job on hand at present. I will have a lot of cement walk to build this season. This has been a busy year. I have not lost a day and usually have more than I can get help to do. I appreciate your valuable paper and think it is about the best paper on masons' work I know of. I am especially interested in concrete work and would not take \$1.00 for your last number if I could not get another."

National Art Stone Co.

The affairs of the National Art Stone Co., 400 West Lehman Street, Dayton, Ohio, are being wound up by Mr. W. T. Kernan, who was appointed a receiver by the courts. When asked if there was any likelihood of the business being continued, Mr. Kernan said that he did not think so, although there was a good opportunity for some one to build up a good business. The old firm failed on account of mismanagement. They were manufacturers and contractors for concrete sidewalks and building blocks, and carried quite an extensive stock.

Granitoid Construction Co.

The Granitoid Construction Co. have their offices in the First Nat. Bank Bldg., Nashville, Tenn. Their plant is located at Van Blarcom Station, on the outskirts of Nashville. They are among the largest operators in concrete work in Nashville, and have erected very many handsome buildings in and about the city in the past few years. Many of the handsomest residences in Nashville have been erected by them, and attest to the cement block's popularity.

Southern Bitulithic Co.

The Southern Bitulithic Co. have offices in the First National Bank Building, in Nashville. Mr. G. M. Ingram is the president of the concern. They are the Southern agents for bitulithic paving, and have many contracts pending and under way. Many of the Southern cities are using this style of street construction, and wherever it is used, it has given eminent satisfaction.

Remodeled Church.

One of the handsomest edifices in Dayton, Ohio, is a recently remodeled church, formerly an old brick building, built many years ago. In the picture accompanying this article, the scaffolding which was erected in order to put on this cement facing can be seen, and also a portion of the building in its original state. To a casual observer the building in its present complete form, has the appearance of a beautiful white limestone edifice.



A CONCRETE VENEERED CHURCH AT DAYTON, OHIO.

H. L. Schute, of Indianapolis, Ind., was the contractor, and T. D. Eichelberger & Sons, furnished the Atlas Portland cement which was used in its construction. This building has attracted no end of favorable comment, and has been the means of securing several other jobs for Mr. Schute of a similar nature. One of the next buildings in Dayton, Ohio, which will be remodeled, is a large church, which the Masons only recently purchased.

Plant Being Rebuilt.

BALTIMORE, MD., February 18.—The plant of the National Hydraulic Stone Co., which burned on the night of January 12, is rapidly being rebuilt, while the firm continues to take care of its large business. The fire was a serious one entailing the loss of \$26,000.00, only a part of which was covered by insurance.

Blocks Popular in Alton.

ALTON, ILL., February 20.—Mr. E. C. Mack is constructing six houses here, all of which are of concrete blocks. Mr. Mack is manufacturing the stone and expects to enter the business extensively in the near future. Some of the finest business buildings in Alton are constructed of blocks which prove the popularity of that material.

The Cement Products and Machinery Co., of Chicago, Ill., has increased its capital stock from \$500.00 to \$75,000.00.

New Wall Machine.

On another page in this issue will be found an advertisement of one of the newest concrete building machines put on the market. It is called the Millam Concrete Wall Building Device, and is an entirely new system fully protected by patents. It is not an experiment, as several buildings have been erected in Kansas City, Kansas, by this process, and they have excited the admiration and wonder of the architects and builders of that city. This machine uses the wet process, thus getting full strength of the cement and is used with sand or any kind of gravel, crushed stone or cinders. It makes hollow or solid walls from 9 to 20 inches wide, with smooth, panel or stone pitched faces. It is also easily adapted to the use of steel reinforcement. One of the principal things to recommend it to the builder is the ease with which it can be operated and the fact that no skilled labor is required.

Company Re-Organized.

GRAND RAPIDS, MICH., February 16.—From a minor concern of Battle Creek to a \$2,000,000.00 corporation of New York City, backed by the Cramp Shipbuilding Co., of Philadelphia, and the Postal Telegraph Co., is the stride that has been taken by the Durable Cement Butt Co.

This company was organized at Battle Creek several years ago by L. K. Forsyth, the inventor of a cement post. It was then incorporated with a capital stock of \$300,000.00, considerable of which was bought by Grand Rapids investors, and which is still retained here. Later the company began the manufacture of cement butts for telegraph and telephone poles. It was then that it began to attract national attention.

The capital stock was doubled and headquarters opened at Detroit, W. C. Maybury, Fred Postal and J. L. Hudson were among those interested.

The company is now to be reorganized. Cortland D. Cramp, of Philadelphia, is to be the new president, with other prominent steel, telephone and telegraph men among its stockholders.

E. M. Hopkins, of Detroit, vice president of the company, was in Grand Rapids, recently gathering up the local stock which is to be turned into the new organization. About nine-tenths of all the old stock has been secured.

The new company is to be formed under the laws of New Jersey. It will issue a million in common and a million in preferred stock. About \$1,750,000.00 will be paid in. The company will continue to operate in Battle Creek. It will, however, construct several plants, to be placed on especially constructed flat cars and moved to any locality.

The cement butts are designed to take the place of the lower part of poles which have decayed after being in the ground for years. The Michigan Telephone Co., the Postal Telegraph Co., the Michigan Central railroad, and the Detroit United Railway have all given them thorough tests.

The Haworth Stone and Building Co., Haworth, N. J., has been organized to manufacture stone and building materials. The capital stock is \$10,000.00. The incorporators are: Fred Robin, Jr., Emma H. Hennessey, Haworth, N. J., and Edward J. Connelly, of Brooklyn, N. Y.

The Waterloo Cement Tile Machinery Co., of Waterloo, Iowa, has been organized with a capital stock of \$55,000.00, of this amount \$30,000.00 is paid up. The officers are: John M. Schenk, president; Frank J. Pfiffner, vice president; Albert E. Pfiffner, secretary, and John H. Stewart, treasurer.

The Cement Post and Pile Co., of Orangeburg, N. Y., has been organized with a capital stock of \$200,000.00. Those interested are: Messrs. G. A. Le Feore, of Orangeburg, and W. H. Coe and W. B. Hutchinson, of New York City.

The Acme Cement Stone Co. has been organized at Chattanooga, Tenn., with a capital stock of \$10,000.00. J. L. Hale, H. D. Huffaker, J. M. Lanier, James Forbes and A. C. Foust are the incorporators.

The Monticello Cement Stone Co., Monticello, Ark., has been organized with a capital stock of \$10,000.00. The president is H. F. Bailey. A. C. Thompson and C. F. Hudspeth are the directors.

IOWA CEMENT USERS

Hold Second Annual Convention at Ames,
Look Over the Excellent Exhibits
and Get a Large Store of
New Ideas.

CEMENT BRICK GAINING PROMINENCE.

The Iowa Association of Cement Users held their second annual convention at Ames, Iowa, on the 9th and 10th of this month. Over one hundred of the largest users and makers in the State registered upon the books of the secretary and the entire meeting was pronounced a great success.

The exhibit feature of the convention was participated in by over twenty different concerns who arranged attractive displays and exhibited their products to many interested spectators.

During the business session Mr. L. L. Bingham, of Estherville, Iowa, who is one of the most widely known cement men throughout the State was elected as the new president of the association. Mr. Bingham, whose picture appears in connection with this report, sums up the convention by saying, "Intelligent comprehension of the wisdom of highest attainable excellence in all lines of concrete work and marked improvement during the year in the average quality of building blocks turned out by members in that branch of the work were points especially notable in the convention. Cement brick and cement drain tile and sewer pipe machinery commanded much attention in the exhibit hall."

Mr. George S. Carlin, of Oskaloosa, Iowa, was elected first vice president for the coming year, Mr. J. B. Fans, of Neola, Iowa, second vice president; Mr. George W. Ross, Grinnell, Iowa, treasurer; and Mr. Ira A. Williams, of Ames, secretary.

The first day of the meeting was given over to the appointment and reports of the different committees and papers by A. O. Tabor, of Waterloo, J. B. Schifferdecker, of Waterloo, J. W. Dickenson, of Chicago, F. B. Peterson, of Fairmont, Minn. President R. G. Coutts, of Grinnell delivered his annual address and speeches of welcome were made by President Storms, Mayor Sheldon, both of Ames, Professor Reyer, of the Iowa State University, also read a paper on the "Outlook for the Manufacture of Portland Cement in Iowa."

The second day was devoted to valuable papers by O. U. Miracle, of Minneapolis, H. R. Bookna, of Chester, T. H. MacDonald, of Ames, J. B. Marsh, of Des Moines, T. H. Unger, of Coon Rapids, F. W. Leuch, of Waterloo, William De Vries, of Ida Grove, Prof. A. Marston and M. J. Reinhart, Ames, and S. W. Coombs, of Iowa City, and the election of officers for the succeeding year.

Mr. A. O. Tabor, of Waterloo, Iowa, who was to have presented the first paper on the program was unable to attend this meeting of the association and for that reason did not prepare a paper.

Mr. J. Schifferdecker, of Waterloo, Iowa, presented a paper on "The Manufacture and Uses of Concrete Blocks" during the session of the first day and this paper contained many valuable points. Limited space prevents the publication of the paper complete, but a few interesting items have been gleaned from it for the benefit of our readers.

A FEW OF MR. SCHIFFERDECKER'S REMARKS.

"Face blocks with a facing composed of one to one and one-half and one to two of any kind of material that your customers desire in colors and shades and this facing will be milled together to insure proper mixing and to get the fineness necessary for density and appearance.

"When your machine is filled, tamp it, and tamp it well with heavy tampers made of iron not over one inch thick and three inches wide, but drive it to the bottom. Don't be afraid you will hurt the concrete for you will do it good. Placing the concrete and placing it well is half the battle and blocks of such make will stand in buildings of many stories high when properly cured. Such blocks of one of cement to four of sand and gravel, one year old, will have a crushing pressure of 2,000 pounds to the square inch, calculate the full block 9x10x32. With this pressure it means a wall 2,000 feet high.

"The concrete block of the present is undergoing the same change that the common brick of the past has, preferably from the nature of the material. There has only been one thing that has hindered more than others and that is that we

have not been able to cure them fast enough, but this will be overcome by using steam rooms, something I have been considering some time and think will prove satisfactory and practical. One or two things I wish to impress on your minds and these are:

"Don't start in the manufacture of concrete blocks unless you understand the business or are willing to hire someone who does.

"Don't think you can run your plant with nothing but cheap labor.

"Don't use ice cold water to mix your concrete.

"Don't make blocks in freezing atmosphere.

"Don't make up more cement or concrete than can be used in one half hour.

"Don't try to make clean sharp blocks with dirty or rusty moulds.

"Don't try to trowel or work cement after it has acquired its initial set.

"Don't disturb the block after it has commenced to set until it has completely hardened.

"Don't use too much sand or gravel because it is cheap.

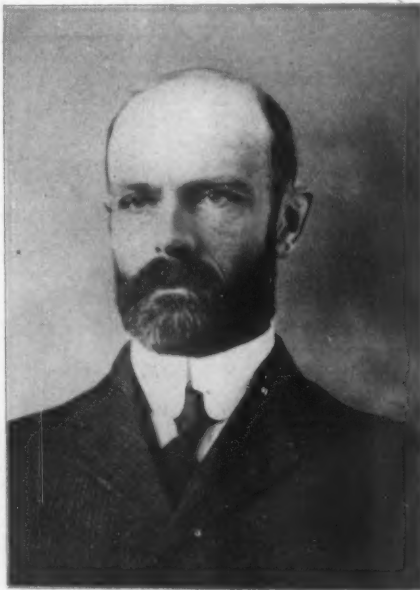
"Don't try to make a cheap block to compete with frame construction because you can't do it.

"Don't make all the blocks with one face or mould.

"Don't forget to keep your blocks wet four to six days after they are made.

"And last, but not least, make a good block and get a good price for it."

Mr. Schifferdecker's paper was well received and commanded much attention from the delegates.



L. L. BINGHAM, PRESIDENT, ESTHERVILLE, IOWA.

Cement brick are rapidly gaining in favor among all cement users and those interested in construction. At every convention exhibits of machines for making this class of building material are accorded a great deal of attention and the subject has come to be one from which unlimited opportunities in the building line are expected. At the Ames convention the cement brick was given due consideration and a great deal of this interest was awakened by the able paper prepared and read by Mr. F. A. B. Paterson, of Fairmont, Minn. The address follows:

MR. PATERSON ON CEMENT BRICK.

"What is clay brick? Nothing but the earth mixed and then burnt.

"What is cement brick? Stone, that is in thousands of small particles, which is mixed with Portland cement.

"When your competitor talks 'clay brick,' in comparing the two brick, you have all the arguments on your side, it not only being fire proof, but has ten times the lasting qualities. Cement brick compares with the best hard pressed brick, and should not be classed with the common clay brick.

"I have heard architects refer to the cement brick that were made 1 to 5, and say that they absorbed too much water. Of course they will absorb water. So will any brick. The writer tested two brick—cement made 1 to 5 and the other clay

brick made at Mankato,—placed them in separate tins and poured 1½ pints of water in each tin, allowing the brick to remain in the tins one hour. They were then taken out and the water remaining was measured. They clay brick showed it had absorbed one-third more water than the cement brick.

"The cement brick is recognized by competent architects as the only material that will make a building fire proof. I can refer you to that artistic building, the armory, which is being built at Minneapolis at a cost of \$150,000.00, and is constructed mainly of concrete and cement brick.

"Rather make a high priced good brick than a low priced inferior one. The public will always pay a good price for a good article, when they know they are getting their money's worth. Those who are contemplating the manufacture of cement brick should carefully consider—

"First, the cost at which they can procure their cement and sand. Second, getting the proper machinery to handle the product, and knowing to a certain extent what opposition they will have to contend with in disposing of their product.

"Cement—Any of the standard Portland cements will answer for the manufacture of the brick.

"Location—In considering a location for the manufacture of cement brick, many things are to be taken into consideration, localities presenting different problems to be overcome. The first question to ask one's self is:

"Will it pay a fair rate of interest on the money invested? Can the locality furnish the sand for the manufacture of the brick and of the right kind, and at a low enough cost, so that you can compete with other brick? This is one of the most important questions; for without good, clean, sharp sand, and at a low cost, you had better not enter in the business.

"Sand—should be sharp, siliceous, clean and free from slate. The writer has found lake shore sand best adapted for making brick, it possessing more silica and is freer from foreign matter. All sand used should be screened. If bank sand is to be used, see that not over ten per cent of clay or other dirt is mixed with the sand. If more than ten per cent of foreign matter is found in the sand, the same will have to be washed until clean water is no longer discolored; but this will add to the cost of the brick. The sharper the sand, the better bond among the grains of sand, hence a stronger brick.

"Mixing—Here is one of the most important items to be considered, because without a good mixture, failure will surely follow. A power batch mixture should be employed. The first coat is of little consideration, when the saving of labor is taken into account, and greater uniformity is obtained in the mixture. To find the proper cement to be mixed with the aggregates of sand on hand, I would advise the water test method, which will enable the maker to know as near as possible the proportions of fine and coarse sand to use so that the aggregate will fill the voids. The method is to pour into a glass or jar, filled with fine and coarse sand, enough water to cover the contents of said glass, or jar. Drain the glass or jar and the water received will for all purposes approximate the amount of cement to be used. Bear in mind that water containing too much dirt or foreign matter is detrimental to your cement. Use clean, soft water, if possible. Now, that we have materials together, we must decide as to what proportions of cement and sand we intend to use. A good brick can be made of a mixture if 1 to 5, and properly cured on a hand power machine giving 80,000 pounds pressure to the square inch, will give compressive strength of 2,000 pounds to the square inch. It takes 5 barrels of cement and 1½ yards sand to make 1,000 brick 1 to 5. Cement brick made as above has five times more compressive strength than common clay brick.

"In experimenting with brick made of a mixture of 1 to 3, two batches were made of the same mixture,—one so-called dry mixture and one so-called medium wet mixture. Both batches were made December 29, 1905. At the end of a month the brick of each batch were placed in separate tins and a pint of water poured in each tin; at the end of an hour each brick was drained and the water remaining was carefully measured, which showed that the brick made of the dry mixture had absorbed one ounce more water than the brick made of the medium wet mixture. Use a medium wet mixture. If your machine will allow it. You will have a better brick; whatever mixture you make your brick of,—be it 1 to 3 or 1 to 5. A facing mixture of 1 to 2, averaging a quarter of an inch thick, backed by a mixture of 1 to 4 or 5, will make water-proof brick equal to any pressed brick on the market.

"Coloring—Only a pure strong mineral color is practical in coloring brick or block. I have had success with Red, Buff and Purple, and believe that the manufacturer will have no trouble with the coloring matter, if the maker will make his brick of the medium wet mixture, and uses care in the curing of his products. I find that there is no rule of three as to quantity to use in the cubic foot. The color of the sand will vary in different localities. Have used as little as four pounds of color to a cubic foot, and then again have had to use nearly double that amount for same surface, but with different sand. A very little time spent in experimenting will show the maker how much to use.

"Curing—Much has been written on the subject; and I believe that the average maker does not give this subject the consideration that it justly deserves. Uniform conditions must be maintained to gain the best results—the dry mixture process requiring somewhat different method of treatment than the medium wet mixture. A brick that has received its final set, then is taken and placed where the hot wind and sun can strike it will not secure the strength and durability as the brick that is taken and placed in a shed away from wind and sun, and where it will produce the chemical reactions necessary for the crystallization of the silicates of lime, etc. For instance, the brick that is made of the dry mixture will require more water and longer period of wetting than the brick made of the medium wet. To get the best results (from the experience the writer has had) the brick after being allowed to receive its final set, which ought to be from two to four days according to the temperature and season of the year, should be taken to a drying shed and burlap or coarse slough hay placed over and around the brick and thoroughly wetted down, not allowing same to become dry for a week. Better results will be obtained than placing the brick where they can not be exposed to sun and wind, and then depending upon some one to occasionally wet them down with no stated time for so doing. The two brick that I experimented with to determine the amount of water that they would absorb, and which I have referred to in this paper, were placed to dry side by side; but the brick made of the dry mixture had a tin placed on half of the top surface. The temperature of the room in which they were dried was at about 65 to 70 degrees. At the end of three days both brick were dry to all appearances. The brick made of dry mixture and the part that was exposed to the air was covered over with alkali and other chemicals, but the part that was covered over by the tin still retained its natural color.

"There was no change whatever with the brick made of the medium mixture."

In this paper Mr. Paterson presents some very strong evidence in favor of the cement brick and having made a study of this subject, speaks from authority. It is certain that the coming year will see the growing and ever increasing popularity of this material for construction. Mr. Paterson's address was commented upon very favorably and evoked a great deal of discussion relative to the possibilities of brick made of cement.

A very practical paper was that which was presented by Mr. William R. de Vries, of Ida Grove, Iowa, upon the subject of "Factory Arrangement and Equipment." From a perusal of the paper it will be seen that Mr. De Vries has made a careful study of the requirements of an up-to-date factory and for this reason the address appears here in full:

FACTORY ARRANGEMENT AND EQUIPMENT.

"A factory should be located on a railroad, as it is cheaper to haul sand from pit to plant, than finished blocks from plant to railway cars or jobs around town. Breakage is less and a factory located in town helps to advertise.

"All buildings should be erected of blocks and the exterior as pleasing as possible.

"A building 50x100 ft. gives ample room for a plant of 200 blocks capacity per day.

"Locate your machines and mixer in such a manner, that the concrete, after having been delivered from the mixer, need not be rehandled and when dumped on a concrete floor, should then be directly shoveled into the block machines. Concrete floors should also be provided under and around the machines and plenty light, where machines stand.

"Have tracks through your buildings and outside yards and provide turn-tables at convenient places. 12 pound T rails spiked to 2x4's or light

half cedar posts are of sufficient weight. However, a good and cheap track can be made of 2x4's with buggy tire iron for the top. Make these tracks in 16 feet sections, in order that they may be easily moved around the yards, when piles of blocks need to be extended temporarily.

"While we never have used double-decked, all steel cars for curing and transferring, we think they would be a great help, as the handling of blocks is a very important feature and should be made as easy as possible. Any hard labor saved in this way will amply repay you in the larger amount of blocks you can make with same number of men.

"We use for our green blocks, racks made of 2x4's, 24 inches on centers and about 12 inches high. They are from 12 to 18 feet long and portable and can be placed in the building, where most convenient and should, of course, be as close to the machines as possible.

"A place in the building 20x70 feet is sufficient for curing and will hold more than one week's work, setting blocks on end.

"Our first work in the morning always begins with removing to the outer yards one day's work of the oldest blocks, which probably have been sprinkled and cured for a week.

"Provide the sprinkling place with a bed of sand about 10 inches deep and keep this part of the house dark and allow no sunlight to play on your green blocks.

"Hydrants should be placed conveniently in the building; two hydrants ought to be enough for the size of building mentioned.

"An automatic, over-head sprinkling device is an ideal arrangement, as the sprinkler can be turned on and do its work, while the men are busy elsewhere and thus no extra man is needed.

"For handling blocks we use block lifters, which can be easily and cheaply made of a piece of hardwood, about 2 1/4 inches thick and of a size, which readily slips into the hollow space of the block and through which is bored a hole longitudinally and a gas pipe inserted.

"For measuring sand and gravel, we use boxes, which are set on the cars and which hold exactly the different batches in proportion to the amount of cement to be used in the batch.

"Allow your track to decline enough from sand pile towards mixer to make loaded cars run without need of pushing.

"Your cement house should be large enough to hold at least 300 barrels and built independent from the main building and must be absolutely dry. When track is laid up to it, it only requires a short time in the morning to pile enough sacks on the cars to last for the day and deposit near the mixer.

"Do not neglect to have a good dry place for your odd molds, which necessarily must accumulate on your hands.

"Pile blocks in outside yards in piles of even numbers, say 400 pieces to the pile and mark the age of the blocks on each pile. It is a very hard and tedious job to lift blocks from the cars and carry them the whole length of the pile and in order to overcome this, we have a contrivance, which does away with considerable of this work. It is a dolly, consisting of two hardwood rollers and a hardwood frame, about 12 inches wide and 24 inches long. After having piled the first row of blocks on the ground, we lay short 4 inch strips on these, which are removed gradually, while the layer increases, put a block on the dolly and roll to furthest end of pile and keep on until layer is of same length as lower one. Always begin piling at end furthest away from track. In this manner you are able to pile your blocks higher and with considerable less work, than you could otherwise and also do away with too many driveways between your piles, as with the aid of the dolly you can make longer piles.

"Your buildings and outer yards must be kept in the best of order; provide a special place, if possible out of sight, for your broken pieces, which by the way may be utilized for underpinning small outbuildings and can always be sold to a good advantage. Reserve a prominent place near the main entrance for displaying odd work and lay up a little wall, using thin, dark painted strips of wood to represent mortar and thus show off, what can be done in the way of belt courses, cornice work, columns, etc."

"A place for every thing and every thing in its place," is a well proven adage, which may be profitably adapted in the plant of every cement user. Convenience in arrangement facilitates work and reduces cost of production materially.

A close study of Mr. de Vries' paper will doubtless save no small sum for many of its readers.

The last paper on the program was prepared and presented to the convention by Mr. S. W. Coombs, of Iowa City, Iowa. The address follows:

THE ABUSES OF THE CONCRETE INDUSTRY AND ITS REMEDIES.

"The subject assigned to me is a far-reaching question, and one that needs prompt and vigorous treatment.

"I have for twenty years been handling Portland cement, concrete, mostly in finished work, such as side-walk, curbing, culvert foundation and finished floor work, and in this time have observed many pieces of work, where good material was spoiled by persons who were ignorant of the nature of the material used. Others destroyed good material by dishonest desire to realize more profit. In one city I might name a so-called cement contractor who distributed circulars stating that 'millions walk on my walks. I make walks, others try.' The result was that inside of one year the top or finished coat was loose, and all of the gravel coming in contact with the top came away with it. The base of the so-called concrete was loose, like gravel; it apparently had very little cement in it; or if sufficient cement was used, it certainly was not properly mixed.

"There are a great many of this same kind of grafters doing business to-day in all branches of the concrete industry all over the State of Iowa. Many concrete men use a given proportion of sand, gravel, stone and cement, regardless of its aggregate relation, as to voids or dirt. Perfect concrete is that wherein all voids are filled and every particle of aggregates in its composition is covered with cement. Concrete of this kind properly put in place and properly cured, will never be a source of trouble to its maker. Again we find that many loose tops are the result of too little water being used in the concrete to cause adhesion of the cement, and aggregate by crystallization. And again by top troweling after the initial setting had begun. Again by using top or finish too rich in cement, which causes its shrinkage or expansion to be different from that of the concrete base.

"Many pay very little attention to the mixing of either concrete base or top. I have taken up work and found the so-called concrete streaked, some parts being very strong with cement, and other parts almost clear sand, consequently it was no good. And in this particular case the parties blamed the cement.

"Again many city engineers make a specification and compel sidewalk contractors, in clay ground, to dig a ditch, six or eight inches deep, and in this, place sand or gravel and on this, build the walk. The winter rains or thaw comes, the water runs under the walk and fills the voids in this sand or gravel filling, there being no place provided for drainage. Then Old Boreas comes and freezes it, making an almost solid sheet of ice six or eight inches thick (what heaves more than ice). In the spring the ice thaws from the outside, leaving a ridge or backbone of ice lengthwise of the walk, for the walk to break over. If it is not a very strong walk indeed it will break sooner or later.

"In the making of cement blocks the same rules apply as in any other branch of the industry. I have in my mind some blocks that I bought to underpin an old three story brick building. The maker of these blocks had no jam or piece blocks, all being the regulation 2-foot blocks and corners, said to be made 4 to 1. I cut these blocks with an old hand saw (they were that soft). In order to make the work stronger I filled all the hollow spaces with good cement mortar.

"We have a prominent building contractor that would use cement blocks in his work if they were made stronger and more like stone in appearance. He very much dislikes the dull gray appearance of most cement blocks, as well as the sameness of the blocks. It looks artificial. Cement concrete, properly made is bound to become the permanent building material of the future.

Remedies.

"Manufacturers of concrete in any form should be honest in their work, and if they don't know how to properly make concrete, get a foreman that does, and insist that he does it to get out of the business. He should see that there is used:

"First. Care in proportions.

"Second. Proper mixing.

"Third. Proper sand, gravel, stone and cement.

"Fourth. No dirt in material used.

"Fifth. Plenty of clean water.

"Sixth. Proper curing of work when done.

"Seventh. Good washed and screened gravel and sand.

"Eighth. The percentage of voids found by actual test is too much cement is waste and too little is sure cause for failure. The maker of concrete to be successful must adhere strictly to the proper percentages of all material used. Dishonest competition, the desire to get the almighty dollar without an equivalent is the cause of a great many abuses of the concrete industry, and the remedies must be vigorously applied to overcome them.

"To assure that proper work is done I would advocate a stringent state law, to regulate the crushing strength of all cement blocks or concrete of any kind in building of houses, sidewalks, etc., and make the inspector of buildings responsible for any failure on the part of the block maker or building contractor to comply with the law, thereby assuring honest and reliable work. Also assuring the success of the cement concrete industry for all time to come and in future history this will be known as the concrete age."

The plain, practical and important points brought out by Mr. Coombs in his paper should receive the earnest consideration of every reader of this article. The great cement industry will advance to far greater importance than it has at present, but the rapidity of that progress will entirely depend upon the knowledge and integrity of those engaged in the business. Such papers as this prepared by Mr. Coombs which point out the right way to progress do much to hasten the approach of the universal cement age.

Some papers prepared and read by able men before the convention are necessarily omitted from this report, however, in some future issue of Rock Products it is probable that other papers of merit presented at this meeting will be printed in these columns.

The Iowa Cement Users' Association is to be congratulated upon holding a convention which resulted in the revelation of so much valuable information by men of experience who are recognized as most progressive leaders in the great and growing cement industry. From every standpoint the convention proved to be successful while the association continues a source of knowledge and an inspiration to greater attainments for the cement users of the far famed "Granger State."

The N. Schneider's Sons Contracting and Construction Co., of Brooklyn, has been organized with a capital stock of \$5,000.00 for the purpose of constructing cement sidewalks and buildings. The incorporators are: Messrs. John J. Schneider, No. 144 Twenty-first Street; Theodore and Rosanna Schneider, No. 450 Sixty-seventh Street, all of Brooklyn.

The Amityville Cement Works, Architectural and Building Co., of Amityville, N. Y., has been incorporated for \$3,500.00 for the purpose of manufacturing cement building blocks, etc. The incorporators are: Messrs. Chas. F. Hart, Abner, B. and Willis B. Ingles and Charles W. Powell, all of Amityville.

The Port Jefferson Cement Block Co., Port Jefferson, N. Y., has been incorporated for the purpose of manufacturing cement blocks. The capital stock is \$100,000.00. The incorporators are: Messrs. Lester H. Davis, Elbert M. Davis and Geo. M. Tooker, E. E. Squires, R. P. Caskett, R. B. P. Walker, all of Port Jefferson.

The Plattsburg Concrete Co., Plattsburg, N. Y., has been incorporated for the purpose of manufacturing concrete building blocks. The capital stock is \$5,000.00. The incorporators are: Messrs. Matthew E. Shepard, George A. Smith and George P. Smith.

Decatur, Ala., will probably have a concrete plant in the near future. Capitalists are organizing a company.

The Hotchkiss Concrete Stone Co., of Chicago, Ill., have moved their offices from room 1109, 100 Washington Street to rooms 1509 and 1510 Manhattan Building, at 315 Dearborn Street.

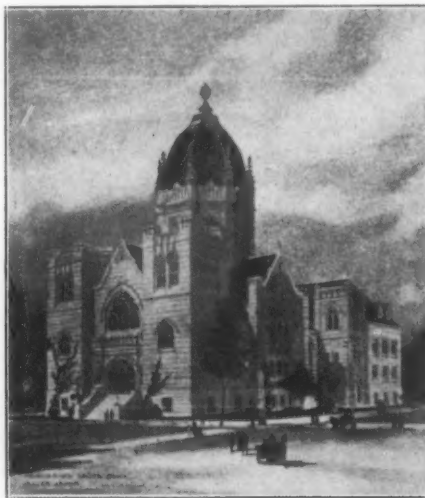
The Monolith Concrete Construction Co. has been incorporated in Milwaukee, Wis., for \$50,000.00. The incorporators are: Henry Ferge, August Reichert and Richard C. Ferge.

The Fred Rheins Cement and Concrete Co., Milwaukee, Wis., has been formed with a capitalization of \$1,000.00. The incorporators are: Mr. Fred Rheins, Mary C. Rheins and Mr. Arthur C. Rheins.

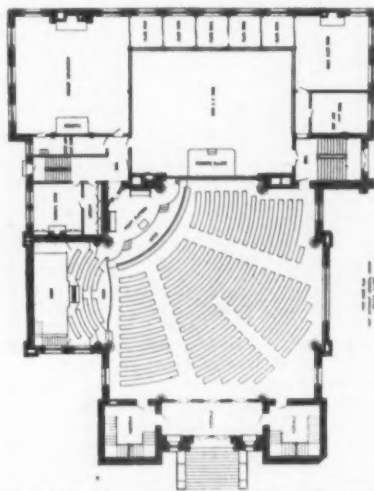
Large Church of Concrete Blocks.

The largest and most beautiful piece of cement construction in the West is probably the new First Methodist Episcopal church, recently erected in Decatur, Ill. A fair idea of the grace and elegance of the design and convenience of arrangement may be obtained from the photograph and cut of ground floor plan printed upon this page.

The exterior dimensions of the handsome edifice are 108x132 feet. It is constructed entirely of concrete blocks made in wooden moulds of the size and shape required by the plans. The moulds were grooved on the board that made the face of the finished block and all concrete was hand tamped into them. All special moulds for making designs of different sizes and kinds used in the structure were first made by casting the moulds in plaster of paris for the shape desired and then



M. E. CHURCH, DECATUR, ILL., ERECTED OF CONCRETE BLOCK.



GROUND FLOOR PLAN OF M. E. CHURCH, DECATUR, ILL.

filling with cement. Facing mortar used in the blocks was of terra cotta color which gave the church the appearance of a red sandstone construction.

The roof is of slate and the interior walls and ceilings hard plaster frescoed, which makes a beautiful finish.

Mr. Sidney R. Badgley, architect, of Cleveland, Ohio, designed the plans; Arbogast & Ballard, of Mattoon, Ill., were the general contractors, while George Rackle & Sons, of Cleveland, the cement contractors, who built sheds at the work, made all of the blocks, which process consumed over a year. V. H. Parke & Son Co., of Decatur, builders' supply dealers, furnished the large amount of Atlas cement which was used exclusively in the construction.

The Waxahachie Cement Stone Manufacturing Co. has been incorporated for \$10,000.00 at Waxahachie, Texas. The incorporators are: Messrs. T. A. Ferris, B. G. Phillips, W. A. Crow, J. C. Jarrett and E. S. Boze.

New State Organization.

The concrete and cement manufacturers and users organized a State convention at Lincoln, Neb. The meeting proved very interesting to those in attendance.

State associations are very good things and do much in the way of disseminating information of a useful character. Exchanging ideas is always productive of much benefit. J. W. Cooper called the convention to order and an organization was effected and officers elected.

The John E. Layne Co. has been organized at Minneapolis, Minn., for the purpose of manufacturing artificial stone and cement brick. Capital \$25,000.00. The incorporators are: Messrs. John E. Layne, Thomas T. Widdowson and Lois A. Layne.

The Rochester Concrete Building Material Co., of Rochester, N. Y., has been organized with a capital stock of \$5,000.00 for the purpose of manufacturing concrete blocks, bricks, etc. The incorporators are: Messrs. George R. Knickerbocker and Eugene I. Minnamon, both of Pittsford, N. Y., George A. Cooley and Rollison S. Bostwick, both of Rochester, N. Y.

The Granite Block Manufacturing and Construction Co., of Elizabeth, N. Y., has been formed with a capital stock of \$125,000.00. The incorporators are: Messrs. Charles E. Lockwood, Frank M. Bacon and Roscoe H. Sanborn.

The Dumont Cement Block Manufacturing Co., Quackenbush Avenue, Dumont, N. J., has been incorporated with \$20,000.00 capital. Those interested are: Messrs. William Hopper, Newton A. Fuller, Omer G. Russell and Ira S. Van Orden. They will manufacture cement blocks.

The Interlocking Concrete Block Co. is the style of a new concern formed in Chicago with a capital stock of \$10,000.00. The incorporators are: Messrs. Joseph Schroll, Herman Verbeck and Rudolph William Lotz.

The Concrete Construction Co., of Indianapolis, was recently incorporated for \$10,000.00. They will deal in cement machinery, cement products, etc. Those interested are: Messrs. Nelson F. Scribner, Alfred J. Ralph and Wilber A. Bruce.

The Spokane Concrete Co. was formed in Spokane, Wash., last week. The company is capitalized for \$50,000.00. The incorporators are: Messrs. D. F. Striebeck, J. B. Parker, J. J. Bosworth, W. Deschamps and W. S. Rogers. They will manufacture concrete blocks.

Common Sense Cement Block Machine.

One of the newest machines to come on the market is the Common Sense Cement Block Machine, made by John Strait in Rock Rapids, Iowa. This machine is very simple in construction with nothing to get out of order or break. One feature of the blocks made on this machine is that they have both horizontal and perpendicular air spaces. It is one of the most easily adjusted machines on the market, making blocks either rock face, smooth



COMMON SENSE CEMENT BLOCK MACHINE, MADE BY JOHN STRAIT, ROCK RAPIDS, IOWA.

or panel. By a very simple mechanism you can make ten, twelve and sixteen inch blocks. The long cores are very easily removed as they are capable of contraction and expansion. Two men have made 250 blocks on one of these machines in one day and did their own mixing. Mr. Strait has used one in his home town for some time and it has given eminent satisfaction. It is essentially what its name indicates, a common sense machine.

THE SUPPLY MEN MEET.

(Continued from Page 3.)

- 40 E. H. Goodrich, Windsor Cement Co., Boston, Mass.
- 191 James G. Lincoln, Waldo Bros., Boston, Mass.
- 202 James A. Davis, Lehigh Portland Cement Co., Boston, Mass.
- 241 F. G. Evatt, Toch Bros., Boston, Mass.
- 249 J. Prescott, J. B. Prescott & Son, Webster, Mass.
- 250 W. A. Sanborn, Ham & Carter Co., Boston, Mass.
- 251 E. G. Brick, Whitehall Portland Cement Co., Boston, Mass.
- 299 Geo. M. Fiske, cement and brick, Boston, Mass.
- 18 C. H. Little, The C. H. Little Co., Detroit, Mich.
- 78 A. H. Apted, Grand Rapids Plaster Co., Grand Rapids, Mich.
- 112 F. B. Holmes, F. B. Holmes Co., Detroit, Mich.
- 113 F. J. Van Allen, Michigan Sewer Pipe Co., Jackson, Mich.
- 6 C. W. S. Cobb, Glencoe Lime and Cement Co., St. Louis, Mo.
- 207 Gordon Willis, Hunkins-Willis Lime Co., St. Louis, Mo.
- 111 Frank J. Hineline, Camden Lime Co., Camden, N. J.
- 124 J. L. Wilson, Beverly, N. J.
- 129 H. T. Justice, J. T. Justice & Co., Camden, N. J.
- 141 D. E. Minard, Stowell Manufacturing Co., Jersey City, N. J.
- 148 Brenton Tomkins, Tomkins Bros., Newark, N. J.
- 150 B. Tellicoff, Tellicoff & Frankel, Newark, N. J.
- 157 Jas. M. Reilly, Sec'y M. M. D. Association, Newark, N. J.
- 158 John M. Campbell, M. M. D. Association, Passaic, N. J.
- 159 H. P. Cook, Cook & Genung Co., Newark, N. J.
- 211 Lenard Brehm, J. S. Justice & Co., Camden, N. J.
- 232 S. Frankel, Petticoff & Frankel, Camden, N. J.
- 237 H. S. McCartney, The John R. Williams Co., Newark, N. J.
- 238 H. L. Rote, The John R. Williams Co., Newark, N. J.
- 240 J. L. Justice, J. L. Justice & Co., Camden, N. J.
- 47 Frank H. Upton, Toch Bros., New York, N. Y.
- 59 Jos. J. Mousley, J. J. M. Roan, Rochester, N. Y.
- 62 W. K. Squier, Syracuse, N. Y.
- 67 F. L. Lane, Buffalo, N. Y.
- 73 E. Puzey, Newman's Akron Supply Co., Buffalo, N. Y.
- 144 A. C. Horn, Gross & Horn, New York, N. Y.
- 152 C. C. Calkins, J. B. King, Buffalo, N. Y.
- 153 M. A. Reeb, M. A. Reeb, Buffalo, N. Y.
- 156 Samuel Siddall, General Fire Proofing Co., New York, N. Y.
- 165 Martin Kuhne, Truss Metal Lath Co., New York, N. Y.
- 180 A. H. Stowell, St. Mary's Sewer Pipe Co., Buffalo, N. Y.
- 184 W. W. Bale, Pennsylvania Cement Co., New York, N. Y.
- 188 E. N. Croil, Buffalo, New York.
- 192 W. H. Revis, New York.
- 195 F. A. Fuller, National Roofing Co., Tonawanda, New York.
- 196 W. H. Chatfield, National Roofing Co., Tonawanda, New York.
- 205 W. B. Beach, Pennsylvania Cement Co., New York, N. Y.
- 213 R. Austen Tomes, Atlas Portland Cement Co., New York, N. Y.
- 214 C. A. Kimball, Atlas Portland Cement Co., New York, N. Y.
- 216 S. M. Child, The General Fireproofing Co., New York, N. Y.
- 219 M. E. Gregory, Brick Terra Cotta and Tile Co., Corning, N. Y.
- 221 W. E. Miner, Atlas Portland Cement Co., New York, N. Y.
- 226 J. H. Ross, Buffalo, N. Y.
- 234 W. C. Newman, Newman's Akron Cement Co., Buffalo, N. Y.
- 242 H. Stevens, Toch Bros., New York, N. Y.
- 244 Jos. C. Seguin, J. B. King & Co., New York, N. Y.
- 245 F. L. Kane, Sackett Wall Board Co., New York, N. Y.
- 246 Wm. S. Babcock, Barrett Manufacturing Co., New York, N. Y.

- 247 H. E. Dingley, National Wall Plaster Co., Syracuse, N. Y.
- 253 F. Newman, Gross & Horn, New York, N. Y.
- 255 J. Maxwell Carrier, Blanc Stainless Cement Co., New York, N. Y.
- 270 John A. Hall, National Builders' Supply Association, New York, N. Y.
- 283 D. Carpenter, General Fireproofing Co., New York, N. Y.
- 290 C. A. Egby, Queen & Crescent Railroad, New York, N. Y.
- 300 Clarence H. Newell, National Fireproofing Co., East Aurora, N. Y.
- 301 E. J. Berke, Hydraulic Brick Co., Rochester, N. Y.
- 4 Richard Kind, Toledo Builders' Supply Co., Toledo, Ohio.
- 7 John A. Kling, Cleveland Builders' Supply Co., Cleveland, Ohio.
- 10 H. B. McMaster, The General Fireproofing Co., Youngstown, Ohio.
- 11 Geo. H. Gengnagel, Schaeffer & Gengnagel Co., Dayton, Ohio.
- 12 Wm. G. Hurlbert, Bostwick Steel Lath Co., Niles, Ohio.
- 16 J. W. Eichelberger, T. D. Eichelberger & Sons, Dayton, Ohio.
- 17 Harry S. West, National Builders' Supply Association, Toledo, Ohio.



RICHARD KIND, TOLEDO, OHIO, RE-ELECTED SECRETARY.

- 20 F. W. Owsney, The East Ohio Sewer Pipe Co., Frondale, Ohio.
- 23 R. S. Rhoads, American Sewer Pipe Co., Columbus, Ohio.
- 24 W. T. Akers, Akron Supply Co., Akron, Ohio.
- 27 W. E. Wright, Peterson & Wright, Akron, Ohio.
- 28 Elihu Harpham, Buckeye and Summit Sewer Pipe Co., Akron, Ohio.
- 29 Chas. F. O'Donnell, Buckeye Portland Cement Co., Bellefontaine, Ohio.
- 30 W. W. Hoffman, Lorain Supply Co., Lorain, Ohio.
- 31 H. F. Rowse, The Robinson Clay Product Co., Akron, Ohio.
- 36 W. W. Coney, The Moores-Coney Co., Cincinnati, Ohio.
- 37 Fred. W. Fogarty, The Granite Clay Co., Mogadore, Ohio.
- 41 L. C. Coplin, The Thos. Phillips Co., Akron, Ohio.
- 45 G. T. Whitmore, Granite Clay Co., Mogadore, Ohio.
- 48 H. B. Manton, Robinson Clay Product Co., Akron, Ohio.
- 68 F. C. Pew, Ohio Plaster and Supply Co., Steubenville, Ohio.
- 70 Geo. N. Charles, American Rolling Co., Middletown, Ohio.
- 71 Geo. W. C. Christain, Marion, Ohio.
- 74 D. W. Lovejoy, Ohio Builders' Supply Co., Toledo, Ohio.

- 75 R. E. Do Ville, Ohio Builders' Supply Co., Toledo, Ohio.
- 88 J. B. Nicholson, Toronto Fire Clay Co., Steubenville, Ohio.
- 99 C. S. Bigsby, Garry Iron and Steel Co., Cleveland, Ohio.
- 102 W. Whaley, Thos. Phillips Co., Akron, Ohio.
- 103 F. B. Jones, Acme Coal and Builders' Supply Co., Toledo, Ohio.
- 105 J. J. Urschal, Woodville White Lime Co., Toledo, Ohio.
- 116 W. E. Shearer, United States Gypsum Co., Chicago, Ill., Cleveland, Ohio.
- 117 Charles Downing, United States Gypsum Co., Cleveland, Ohio.
- 119 A. Robinson, Robinson Sewer Pipe Co., Uhrichsville, Ohio.
- 120 C. L. Graves, Robinson Sewer Pipe Co., Uhrichsville, Ohio.
- 127 P. H. Degnan, Toledo Builders' Supply Co., Toledo, Ohio.
- 131 Joseph Loeb, Uhrichsville, Ohio.
- 134 E. S. Walton, Youngstown, Ohio.
- 143 W. S. McCammon, L. H. McCammon Bros., Cincinnati, Ohio.
- 147 C. W. Filler, Logan Brick Manufacturing Co., Toledo, Ohio.
- 177 J. P. Carlile, Builders Supplies, Columbus, Ohio.
- 178 E. C. Kissinger, Columbus, Ohio.
- 185 Jas. M. Snook, Bessemer Limestone Co., Youngstown, Ohio.
- 200 F. L. Stewart, Sykes Metal Roofing Co., Niles, Ohio.
- 209 F. E. Anthony, Cleveland Bag Co., Cleveland, Ohio.
- 218 John Mueller, Cincinnati, Ohio.
- 223 A. W. Munsell, Baltimore and Ohio Railroad, Wheeling, Ohio.
- 224 J. Jacobs, Ohio Brick Co., Toledo, Ohio.
- 225 A. A. Pauly, Concrete and Sand Co., Youngstown, Ohio.
- 236 J. E. Conley, J. E. Conley & Co., Dayton, Ohio.
- 248 E. J. Tully, Builders' Supply Co., Cincinnati, Ohio.
- 269 Edwin G. Way, National Builders' Supply Association, Toledo, Ohio.
- 273 R. G. Sykes, Sykes Metal and Roofing Co., Niles, Ohio.
- 277 C. B. Stowe, Stowe, Fuller & Co., Cleveland, Ohio.
- 293 Alonzo Reiley, Logan Brick Co., Toledo, Ohio.
- 302 Wm. H. Hunt, Hydraulic Brick Co., Cleveland, Ohio.
- 1 Wm. B. Irvine, Knickerbocker Lime Co., Philadelphia, Pa.
- 2 Chas. C. Cox, C. A. Cox's Sons, Philadelphia, Pa.
- 8 J. N. Thayer, O. C. Thayer & Son, Erie, Pa.
- 9 Horace A. Webster, Builders' Exchange, Philadelphia, Pa.
- 13 Kent E. Lyman, Jamestown Paint & Varnish Co., Jamestown, Pa.
- 14 Ed. McCrady, McCrady Bros. Co., Braddock, Pa.
- 15 Geo. T. Heppenstall, Heppenstall & Marquis, Pittsburg, Pa.
- 19 C. L. Johnson, Castalia Portland Cement Co., Pittsburg, Pa.
- 21 W. H. Williams, W. H. Williams & Co., Pittsburg, Pa.
- 22 B. G. Bealer, Duquesne Fireproofing Co., Pittsburg, Pa.
- 25 Geo. W. Hackett, Castalia Cement Co., Pittsburg, Pa.
- 26 G. D. Hackett, Castalia Cement Co., Pittsburg, Pa.
- 32 H. M. Fetter, Wm. G. Hartranft Cement Co., Philadelphia, Pa.
- 33 J. L. Durnell, Lyster Supply Co., Philadelphia, Pa.
- 34 Cyrus Bogner, Cyrus Bogner & Co., Philadelphia, Pa.
- 35 F. M. Hoover, Bathe Portland Cement Co., Philadelphia, Pa.
- 46 D. J. Kennedy, D. J. Kennedy & Co., Pittsburg, Pa.
- 49 Edward D. Boyer, Atlas Portland Cement Co., Catasauqua, Pa.
- 52 S. M. Houston, Houston Bros. Co., Pittsburg, Pa.
- 53 J. J. Haas, Houston Bros. Co., Pittsburg, Pa.
- 54 Walter G. Dutton, Lyster Supply Co., Philadelphia, Pa.
- 56 John A. Strauss, Knox, Strauss & Bragdon, Allegheny, Pa.
- 57 Chas. P. Theis, Patterson Supply Co., Allegheny, Pa.
- 58 S. J. Vall, Whitehall Portland Cement Co., Philadelphia, Pa.
- 61 E. L. McMullen, Whitehall Portland Cement Co., Philadelphia, Pa.

- 63 Grant S. Murray, Murray Bros., Pittsburg, Pa.
 64 J. C. Porter, Duncan & Porter Co., Allegheny, Pa.
 66 E. H. Merriman, Paragon Plaster Co., Scranton, Pa.
 69 Luther Keller, Scanton, Pa.
 72 J. F. Twomley, Copley Cement Co., Philadelphia, Pa.
 76 Fred. W. McKee, Duquesne Fireproofing Co., Pittsburg, Pa.
 84 C. M. Camm, Lesley Trinkle Co., Philadelphia, Pa.
 85 R. E. Griffith, Lesley Trinkle Co., Philadelphia, Pa.
 86 R. W. Lesley, American Cement Co., Philadelphia, Pa.
 87 J. H. McCrady, McCrady Bros., Braddock, Pa.
 89 H. F. Rauch, Whitehall Portland Cement Co., Philadelphia, Pa.
 90 Geo. W. Witman, C. K. Williams & Co., Easton, Pa.
 91 Nelson O. Lyster, Chas. Warner Co., Philadelphia, Pa.
 92 Fred. A. Duball, Chas. Warner Co., Philadelphia, Pa.
 93 Harry W. Gilbert, Philadelphia, Pa.
 94 Thos. D. Brown, American Sewer Pipe Co., Pittsburg, Pa.
 95 Chas. M. Morris, Philadelphia, Pa.
 96 W. B. Gaucher, American Sewer Pipe Co., Pittsburg, Pa.
 97 Thos. F. Armstrong, Concling-Armstrong Co., Philadelphia, Pa.
 101 Walter T. Bradley, Walter T. Bradley Co., Philadelphia, Pa.
 106 Benj. K. Nusbaum, Tock Bros., New York, N. Y., Philadelphia, Pa.
 107 Geo. N. McAlarney, Wilkes-Barre, Pa.
 121 C. F. Onell, Lehigh Portland Cement Co., Allentown, Pa.
 122 Washington Harder, Hartranft Cement Co., Philadelphia, Pa.
 123 S. G. K. Stradley, Vulcanite Portland Cement Co., Philadelphia, Pa.
 125 L. V. Clark, Lawrence Cement Co., Philadelphia, Pa.
 126 Frank Oberkirch, St. Mary's, Pa.
 128 Chas. B. Woods, Philadelphia, Pa.
 130 James M. Kelley, M. Kelley & Sons, Philadelphia, Pa.
 132 C. P. Robinson, Whitehall Cement Co., Philadelphia, Pa.
 135 C. A. Palmer, Robinson Clay Product Co., New York, Philadelphia, Pa.
 138 Morris M. Hunter, Bonnevillie Cement Co., Philadelphia, Pa.
 139 Geo. A. Sinn, Philadelphia, Pa.
 140 Chas. H. Breerwood, Bonnevillie Cement Co., Philadelphia, Pa.
 145 O. G. Johnson, Lawrence Cement Co., Philadelphia, Pa.
 146 J. O. Cooper, Gross & Horn, Philadelphia, Pa.
 154 H. F. Werle, Whitehall Portland Cement Co., Philadelphia, Pa.
 155 H. B. Green, Whitehall Portland Cement Co., Philadelphia, Pa.
 160 J. G. Conner, Modern Construction Co., Philadelphia, Pa.
 162 F. D. Cod, Philadelphia, Pa.
 163 F. H. McCormick, Diamond Wall Cement Co., Williamsport, Pa.
 164 W. L. White, Paragon Plaster Co., Bloomsburg, Pa.
 166 Granaline Wall Plaster Co., Lebanon, Pa.
 167 De Frain Sand Co., Philadelphia, Pa.
 168 Samuel R. Kirkpatrick, Dick Bros & Co., Philadelphia, Pa.
 169 T. W. Singhi, S. Lubin, Philadelphia, Pa.
 172 A. J. Maloney, Whitehall Cement Co., Philadelphia, Pa.
 173 J. Q. Maloney, Whitehall Cement Co., Philadelphia, Pa.
 175 Henry Longcope, Alpha Cement Co., Philadelphia, Pa.
 176 John G. Brown, Unit Concrete Frame Co., Philadelphia, Pa.
 182 A. Q. Starr, Houston Bros. Company, Pittsburgh, Pa.
 183 George W. Sickles, Whitehall Cement Co., Philadelphia, Pa.
 186 J. E. Challenger, Phila. Car Service Assn, Philadelphia, Pa.
 187 Wm. H. Malpass, Phila. Car Service Assn, Philadelphia, Pa.
 189 M. B. Kugler, Northampton Cement Co., Philadelphia, Pa.
 190 Walter Bowditch, Philadelphia, Pa.
 194 John S. Gustine, Tock Bros., New York, N. Y., Philadelphia, Pa.
 197 Charles A. Matcham, Lehigh Portland Cement Co., Allentown, Pa.
 198 Joseph W. Zipperlein, Hartranft Cement Co., Philadelphia, Pa.

- 203 G. W. Mitchell, Lehigh Valley Despatch, Philadelphia, Pa.
 206 C. C. Fredericks, Philadelphia, Pa.
 208 C. C. Gibson, Keystone Plaster Co., Williamsport, Pa.
 212 J. L. Hinterleiter, Walter T. Bradley Co., Philadelphia, Pa.
 215 J. J. Fitzgerald, Patton Clay Mfg. Co., Philadelphia, Pa.
 220 C. B. Nichols, Westmoreland Coal Co., Philadelphia, Pa.
 222 W. H. Harding, Copley Cement Mfg. Co., Philadelphia, Pa.
 227 W. L. Helsey, High Lime and Stone Co., Rheems, Pa.
 228 T. H. Repass, Atlas Portland Cement Co., Northampton, Pa.
 229 H. J. Seaman, Atlas Portland Cement Co., Northampton, Pa.
 230 A. G. Croll, Atlas Portland Cement Co., Northampton, Pa.
 231 Jas. B. Weaver, Edison Portland Cement Co., Philadelphia, Pa.
 233 A. H. Lauman, Standard Lime Co. of Ohio, Pittsburg, Pa.
 235 D. C. McCurdy, D. C. McCurdy & Co., Pittsburg, Pa.
 239 C. E. Wallace, Philadelphia, Pa.
 243 John H. Holmes, J. B. King & Co., New York, Philadelphia, Pa.
 252 T. D. Fry, Interstate Sand Co., Philadelphia, Pa.



CHAS. H. CLASSEN, BALTIMORE, MD., RE-ELECTED TREASURER.

- 254 Jacob Tyson, Philadelphia, Pa.
 256 C. Earle C. Bottomley, Assistant of American P. C. Mfgs., Philadelphia, Pa.
 258 F. G. Pate, Pecora Paint Co., Philadelphia, Pa.
 259 W. H. Evans, Pecora Paint Co., Philadelphia, Pa.
 260 Benj. P. Obdyke, Philadelphia, Pa.
 261 N. M. Tulloch, Philadelphia, Pa.
 263 P. S. Vollmer, Atlas Portland Cement Co., Philadelphia, Pa.
 264 J. Allen Boone, Philadelphia, Pa.
 265 Harry C. Trexler, Lehigh Portland Cement Co., Allentown, Pa.
 266 Geo. G. Skyes, Lehigh Portland Cement Co., Allentown, Pa.
 267 E. M. Young, Lehigh Portland Cement Co., Allentown, Pa.
 268 Geo. Ormord, Lehigh Portland Cement Co., Allentown, Pa.
 271 Edwin M. Reminger, Lehigh Portland Cement Co., Allentown, Pa.
 272 J. G. Klemm, Jr., Sackett Wall Board Co., Philadelphia, Pa.
 274 Eugene P. Evans, Lehigh Valley Railroad, Philadelphia, Pa.
 275 W. D. Lober, Vulcanite Cement Co., Philadelphia, Pa.
 276 A. M. Moyer, Vulcanite Cement Co., Philadelphia, Pa.
 278 F. S. Challenger, Philadelphia Car Service Association, Philadelphia, Pa.
 279 John J. Sinn, Philadelphia, Pa.
 280 Hubert C. Sinn, Philadelphia, Pa.

- 281 Geo. L. Stewart, Copley Cement Co., Philadelphia, Pa.
 284 C. H. Nichols, Jr., General Fireproofing Co., New York, N. Y., Philadelphia, Pa.
 285 Robt. E. McClusker, Wm. H. Albertson Co., Philadelphia, Pa.
 286 John C. Lindsay, S. Bowen & Son, Philadelphia, Pa.
 287 C. Elmer Smith, Builders' Exchange, Philadelphia, Pa.
 288 Geo. W. Roydhouse, Roydhouse & Arey Co., Philadelphia, Pa.
 289 J. A. Horner, Bath Portland Cement Co., Bath, Pa.
 292 R. F. Campbell, Central States Despatch Line, Philadelphia, Pa.
 294 E. Meyer, Edison Portland Cement, Philadelphia, Pa.
 295 Robert L. McKallip, L. S. McKallip & Co., Pittsburg, Pa.
 296 W. J. Mathews, Whitehall Portland Cement Co., Philadelphia, Pa.
 303 S. B. Goucher, American Sewer Pipe Co., Pittsburg, Pa.
 304 Geo. A. Bass, Eastern Hydraulic Press Brick Co., Philadelphia, Pa.
 306 Chas. Wilson, John T. Baily & Co., Philadelphia, Pa.
 5 Charles Weiler, Western Lime and Cement Co., Milwaukee, Wis.
 38 C. P. Flatley, Flatley Bros., Green Bay, Wis.
 108 Edward Bogk, Ricketson Paint Works, Milwaukee, Wis.
 142 R. C. Brown, Cook & Brown Lime Co., Oshkosh, Wis.
 307 Geo. J. Schwarz, Rickelson & Schwarz, Milwaukee, Wis.
 98 R. W. Marshall, Wheeling Wall Plaster Co., Wheeling, W. Va.
 174 J. M. Blach, Fairmont, W. Va.

THE LADIES PRESENT.

- 21 Mrs. E. H. Moellerling, Fort Wayne, Ind.
 22 Mrs. C. E. Moellerling, Fort Wayne, Ind.
 49 Miss Sarah Meyer, Indianapolis, Ind.
 5 Mrs. Harry P. Boyd, Baltimore, Md.
 37 Mrs. T. W. Spinks, Covington, Ky.
 6 Miss Nellie Kelly, Baltimore, Md.
 7 Miss Georgie Kelly, Baltimore, Md.
 8 Miss Etta Kelly, Baltimore, Md.
 30 Mrs. C. H. Classen, Baltimore, Md.
 31 Miss Nellie M. Classen, Baltimore, Md.
 45 Mrs. H. D. Bulkley, Baltimore, Md.
 3 Mrs. I. O. Goodrich, Boston, Mass.
 20 Mrs. F. B. Holmes, Detroit, Mich.
 23 Mrs. Frank J. Hinelein, Camden, N. J.
 51 Mrs. Sara T. Minard, East Orange, N. J.
 59 Miss Louise K. Kane, New York City.
 11 Esther E. Kling, Cleveland, Ohio.
 14 Mrs. G. H. Charis, Middletown, Ohio.
 25 Mrs. J. B. Nicholson, Steubenville, Ohio.
 33 Miss Hal Walton, Youngstown, Ohio.
 34 Mrs. Ed. S. Walton, Youngstown, Ohio.
 38 Mrs. W. W. Conly, Cincinnati, Ohio.
 39 Mrs. R. Kind, Toledo, Ohio.
 40 Miss Lenora Kind, Toledo, Ohio.
 47 Mrs. John Mullen, Cincinnati, Ohio.
 54 Miss Julia Jacobs, Toledo, Ohio.
 56 Mrs. R. S. Rhoads, Columbus, Ohio.
 57 Mrs. A. H. Huston, Columbus, Ohio.
 1 Mrs. Geo. T. Heppenstall, Pittsburg, Pa.
 2 Mrs. B. G. Bealor, Pittsburg, Pa.
 4 Mrs. D. J. Kennedy, Pittsburg, Pa.
 9 Mrs. Edw. D. Boyer, Catasauqua, Pa.
 12 Mrs. F. M. Hoover, Philadelphia, Pa.
 15 Nellie H. Murray, Pittsburg, Pa.
 16 Marie G. Borgner, Philadelphia, Pa.
 17 Mrs. G. N. McAluney, Wilkesbarre, Pa.
 18 Mrs. H. M. Fetter, Philadelphia, Pa.
 19 Mrs. H. F. Rauch, Philadelphia, Pa.
 24 Mrs. J. W. McCrady, Edgewood, Pa.
 26 Mrs. Walter T. Bradley, Philadelphia, Pa.
 27 Mrs. James M. Kelley, Philadelphia, Pa.
 28 Mrs. Charles C. Cox, Philadelphia, Pa.
 29 Mrs. B. K. Nusbaum, Philadelphia, Pa.
 32 Mrs. M. M. Hunker, Philadelphia, Pa.
 35 Mrs. F. D. Cox, Philadelphia, Pa.
 36 Miss Mary Irvine, Philadelphia, Pa.
 41 Mrs. Chas. A. Matcham, Allentown, Pa.
 42 Mrs. A. L. Shaw, Germantown, Pa.
 43 Mrs. H. W. Gilbert, Philadelphia, Pa.
 44 Mrs. Freda Daboll, Philadelphia, Pa.
 46 Mrs. N. O. Lyster, Philadelphia, Pa.
 48 Mrs. Chas. M. Camm, Philadelphia, Pa.
 52 Miss B. Magill, Philadelphia, Pa.
 53 Mrs. H. A. Webster, Philadelphia, Pa.
 55 Mrs. J. L. Durrell, Philadelphia, Pa.
 58 Mrs. J. B. Weaver, Philadelphia, Pa.
 60 Mrs. C. Borgner, Philadelphia, Pa.
 61 Mrs. J. S. Adams, Philadelphia, Pa.
 Mrs. C. M. Camm, Philadelphia, Pa.
 Mrs. Geo. H. Gengnagel, Dayton, Ohio.

MORNING SESSION, FEBRUARY 6th.

The delegates were a little slow in coming together for the first session owing in some cases to the festivities of the previous evening and others to the lateness of the trains bearing them to the city. It was after 10:00 o'clock when President John A. Kling, called the meeting to order in his usual business-like way and called on assistant Harry West to call the roll. About 100 members answered "Here" and about this time Col. Wm. Irvine, Chairman of the Quaker City Committee, walked up the aisle with Mayor Weaver on his arm and it was a happy day for the Democrats for everybody knows what Weaver did to the Republican machine of Philadelphia a few weeks ago. The Mayor was received with applause and in a very happy little speech he extended the freedom of the city, after the time honored custom, to the visiting delegates touching lightly on the wonderful past record of Philadelphia, her glowing present and her mighty future and in a business-like manner he mentioned the deliberations of the convention and his hope that the meeting in the Quaker City would result in lasting benefits to every delegate present. The close of his remarks were a climax as follows: "You're welcome to Philadelphia. You are thrice welcome for although this city was the largest on the continent one hundred years ago, we have been steadily progressing and while two cities are greater in population, this Quaker City has lost none of her distinction, her patriotism or her hospitality and as we are constantly growing and doing much building and will in the future certainly do still more building, we welcome you both at home and abroad to furnish us with building material."

President Kling responded on behalf of the National Builders' Supply Association, thanking the Mayor for the courtesy and cordiality expressed to the visiting delegates in the city of brotherly love and said that he anticipated that the deliberations of the convention would be profitable and certainly pleasant to every member.

Col. Wm. Irvine again appeared on the stage and introduced Mr. Thos. Armstrong, president of the Philadelphia Builders' Exchange, who in a very pleasant way said, "Representing the Builders' Exchange of Philadelphia, and following Mayor Weaver, which by the way is somewhat the fashion in this city of late (laughter), you all see it is easy to follow him anyway, I believe ours is the oldest and has been the pattern to a greater or less degree for all the Builders' Exchanges that have come into being at various points throughout the country. We take a great pride in our Exchange, the exhibition of which constitutes a very interesting collection of material, with models setting forth their uses. Every member of this convention is invited to come to this exchange and examine the particular examples of advantages and merits of its useful existence, all of which are more or less known to you." Looking at the Mayor, Mr. Thompson continued, "Our Exchange has the distinction of including in its membership, the only Democrat in Philadelphia (laughter), but he never votes" (cheers). After the fun subsided Mr. Thompson proceeded to invite the delegates to call at the Builders' Exchange before leaving the city in the following words: "We have provided two barrels of the best cider that ever came over from Jersey and there will be plenty of straws to suck as much as you please. (laughter) It gives me great pleasure to extend to your body a cordial invitation to visit our exchange, to partake of our hospitality. As the Mayor has said, we are proud of Philadelphia. In this I agree with him, but desire to qualify that statement, or, at least, to enlarge upon it. We are, indeed, proud of our great history. Proud of the progress that we started, and prouder that we still maintain our leading position, and I would impress upon you that what we take most pride in is Philadelphia manhood. We do not want you to go home and remember only the things that men have made, without any recollection of our personality. What we want you to say when you go to your respective homes, is that Philadelphia men are the best people you have ever met as the first and greatest impression of your visit."

President Kling on behalf of the association accepted the invitation so cordially extended and on motion it was agreed to visit the Builders' Exchange in a body on Wednesday, February 7, at 12:30 p. m.

The convention then resolved itself into executive sessions and President Kling delivered his

annual address, which rang out clear and distinct favoring the "open door" and the admission of all dealers of good reputation into the fellowship of the National body, thus evidencing a growth of broad gauge thought and action with a view in mind of a closer walk with the manufacturers on a reciprocal basis.

ADDRESS OF PRESIDENT KLING

Only a few years since, a meeting of the nature of the one assembled here to-day would have been considered as impracticable, because of the feeling of distrust prevailing at that time between the various manufacturers and dealers.

We are just as much competitors to-day as then, but realize the right of one another to exist and also, through personal contact, have come to know each other as business men, and not as representatives of his satanic majesty. This result can be traced directly to the efforts of the National Builders' Supply Association, to promote a feeling of confidence and good-will between manufacturer and dealer, in all parts of the territory in which we operate.

Our efforts along this line, while they have not been as effective as we would like to have them, have nevertheless shown sufficient result to encourage us to greater efforts in the future. Manufacturers, who a few years since considered the dealer as an intruder, to-day recognize his im-



A. W. EISENMAYER, DIRECTOR NATIONAL BUILDERS' SUPPLY ASSOCIATION, GRANITE CITY, ILL.

portance and necessity, and treat him as a friend. Others who are antagonistic, take such a position only from lack of proper knowledge, or are of such a position only from lack of proper knowledge, or are of such a disposition as to have practically no friends among dealers.

Given proper encouragement in the law of protection and competitive prices, the dealer at once becomes the best advertising medium obtainable for the manufacturer, and accomplishes what thousands of dollars spent on advertising and salesmen's expenses could not produce.

A large number of manufacturers have been quick to realize the importance and weight of this organization, and also the fact that the individual dealer who is acquainted with local conditions, is by far the better source through which to market his product, and I feel that ere long, all the manufacturers will come to understand that the dealer is the only legitimate channel through which to sell his output.

I am glad of this harmonious condition. Peace is always productive of prosperity and is a period of up-building and profit. Let us continue this feeling of good-will and this congenial understanding, which can only result in benefit to all. I wish to assure all the representatives of the manufacturing concerns gathered here of the friendliest feelings of the members of this organization towards you and the institutions which you represent, and while each and every one of us is not in a position to do business with each one of you individually, we still can oftentimes be of material benefit to you, and more good will accrue as a result of this friendly feeling than if we were each going our way unmindful of the other's interest.

We do not wish to be understood as endeavoring to exclude the manufacturer from territory in which he has no dealer representative, but would ask that in territory of this kind, in fact in all territory, the dealer be protected in the matter of price, i. e., have an agreed price as to the amount which a consumer is to be sold at, over and above the dealer's price.

This would not cause a hardship upon any manufacturer, and would be beneficial to all. The dealer is obliged to carry a large stock of material for the convenience of consumers who are not in a position to purchase in car lots, and as considerable expense is attached to this heavy investment, he is entitled to a fair margin and if the manufacturers are selling in his territory to consumers at practically the same price that is offered to him you can readily see that he is not in a position to obtain a living margin upon the material.

By so doing, the question of sale would be left to quality and if the manufacturer made the sale direct, he would have a considerable larger profit that would otherwise accrue.

You are no doubt familiar, to some extent, with the methods of the organization of the Portland Cement Manufacturers through which they gather information as to market conditions, stocks in the hands of the dealers and mills, prospective demands throughout the country, new uses for their products, etc., thus enabling them to regulate prices according to supply and demand. Without this organization no concerted action such as is now in effect could be had, as there would be no basis to work upon.

An Information Bureau organized on practically the same lines, with our Assistant Secretary, who is a disinterested party, in charge, should be created by the National Builders' Supply Association, for the benefit of its members in good standing. The object of this bureau should be to collect information of every nature pertaining to building materials of all descriptions, together with market conditions, names of manufacturers, and all other information of nature likely to be of value to any one of our members. This information should be gleaned from every reliable source, but by far the greater amount would have to be supplied by our members. I am fully convinced that if all of our members would give to our Secretary only as much information as they give to the representatives of the manufacturers, it would be of immeasurable value.

The information so gathered should be placed at the command of members in good standing in a brief and concise form which would enable them to be fully informed with a minimum effort.

In addition, weekly bulletins could be issued setting forth market conditions, prices, and other notes of interest, thus placing our members in close touch with prevailing conditions and enabling them to make advantageous purchases. In this manner all would derive direct and appreciable benefit from this organization.

Let us complete the organization of the Information Bureau at once, put in charge of it our secretary, who is a disinterested person, and at least try to make it an object to help each other by placing at the disposal of the secretary all such information as will be of benefit to our members.

Further, let us report to our Secretary such firms as make a practice of selling direct to our customers in our territory with an appeal for aid, and in this way put to practical test the influence of our organization as a whole.

I believe that the fact that this organization exists has kept many manufacturers from interfering with the trade who would otherwise not have respected us in the least. If all will give a list of those manufacturers who encroach in their territory, I believe it will be found that the trouble comes from the few who have no friends, and that the question of how best to handle such cases will have to be of necessity carefully considered.

Owing to the difficulty experienced by the nominating committee in making selection of proper candidates for the offices of Vice President, I would recommend that hereafter, these selections be made in a caucus of the attending members of the various States, the names of two members being placed in nomination by each caucus. This would permit of a more intelligent selection since the choice would be made from personal knowledge among the abler members, and would no doubt result in greater effort being put forth to make our organization one of great importance in each State.

The nominating committees thus far have had a very unpleasant task as they have not been in close touch with the true situation as the representatives of each State would be. Ofttimes local and market conditions would make it much better for one or another member to act as Vice President, and such matters could be handled to the best advantage only in a caucus. I would suggest that this matter be taken up at once so as to make it possible to hold such caucuses at this meeting, thus relieving the nominating committee.

I feel that we must create in each individual member a deeper interest in this organization if we are to succeed. The officers alone cannot accomplish what has been set as our aim. It is necessary that each and every member lay hand to the work and assist in carrying out our object and design. In union of purpose and concerted action, there is strength, and if we are to succeed, all must work interestedly together.

With that end in view I would recommend the formation of State organizations in each State in the union. Invite to the formation of such organization every known dealer in building material of every description and every one make it his individual duty to become thoroughly acquainted with all. Acquaintance begets confidence and friendship, promotes good feeling, and lessens ruinous competition. Look well to the social end of such organizations. The feeling of good fellowship thaws conventional ice better than any known process.

I regret to state that it has been called to my attention that some of our members have become luke-warm in association matters, complaining, that no benefits have come to them as a result of their membership. I would state to all such that I am convinced that were it not for this organization, no territory would be respected by any of the manufacturers and we would be in competition with all instead of a few. The recognition which we now receive from the manufacturers can be traced to a large extent, directly to the efforts of this organization or its influence, and I have no fear of being contradicted when I make the prediction that the time is not far distant when the dealer's right will be recognized and respected by practically all manufacturers.

Unity of purpose, concerted action and fair treatment cannot but succeed. Let us unite our forces, assist one another, put aside personal and petty grievances, and all work for the interest of the organization, and nothing can prevent victory.

Our progress may seem slow, results may be discouraging, but let us take a lesson from the gardener who nurses the small tree, and we, even like he, will surely be rewarded. I implore each individual member of this organization to put his shoulder to the work in hand. Let every member determine to add at least one name to the membership during 1906. Instead of complaining, criticising and finding fault, put your surplus energy in motion to add additional membership. Workers are needed and beneficial everywhere and are always in demand. Drones are a burden no matter where they exist. To the work, gentlemen, let us all be up and doing and make this organization one of such strength as to command the respect and admiration of the entire community.

The strength of this organization can be judged not only by its membership, but also by the volume of business transacted. Statistics prepared from actual results are far reaching and prove effective when presenting matters to the Manufacturers' Associations for consideration. A demonstration of this fact was had during the past year.

A matter of no small importance to some of our associates, which does not in any way effect the large majority, but which should nevertheless receive our earnest support, is the question of reciprocity in the matter of duty on building materials passing between the United States and Canada, and vice versa. At present, manufacturers of Canadian Lime are shipping into this country on a duty of 50 cents per ton, whereas manufacturers of sanded wall plaster and Portland cement must pay \$2.50 per ton.

I am much pleased and gratified at the preparation made by the Philadelphia members for the entertainment of this convention. One need have had experience in handling the necessary arrangements of such a convention to appreciate the immense amount of work and the great sacrifice of time which has been made by our Philadelphia members. I deeply appreciate the fact that the

success of this meeting is to a large extent dependent upon the successful consummation of these arrangements, and wish to take this opportunity of expressing my sincerest thanks and declare the hope that the benefits derived by all will be such as to make our Philadelphia brethren feel amply rewarded for their untiring efforts.

In conclusion allow me to express to you my sincere thanks for your forbearance toward me during my four years as president of this association. I assure you that the loyal support accorded me by all, the earnest and concerted efforts of my brother officers, the harmonious action of the Executive Committee and the loyal support of the secretary and his assistant, are more appreciated than words can express.

May nothing impede the progress of our organization and may harmony, good-will and good fellowship prevail in greater measure in the future is the wish of your retiring president.

The president's address was greeted with cheers and the convention adjourned until 2:00 p. m.

AFTERNOON SESSION, FEBRUARY 6th.

President Kling called the meeting to order while the delegates were still streaming into the hall to take their places. Secretary Rich. Kind submitted his annual report, as follows:

SECRETARY'S REPORT.

To the Members of the National Builders' Supply Association.

Gentlemen: We have come together once more, this time to attend the seventh annual convention of our association.

While I did not favor Philadelphia as the place for this convention—because it is not centrally located for our membership—I was aware, however, that the majority of our members favored the selection of an eastern city, and consequently I am glad to be here and with you.

I certainly do hope that this meeting may inspire the building supply men throughout the Eastern States to join hands with us and participate in the evolution which this Association seeks to bring about. What is good and profitable for the building supply dealer in the West is also good for the one in the East, and what is beneficial to the man in Mobile is as well to the man in Duluth.

It is, indeed, very gratifying that a good many Philadelphia firms joined the Association when they became aware of the fact that our annual meeting would take place in their city.

Our Association is well known, well advertised, and I am led to believe that the gain in our membership during the coming year will be larger than any ever recorded before.

The increase of membership during the past year is gratifying. Your Executive Committee held four meetings during the past year, the minutes of such meetings being mailed to the membership at the proper time.

The first meeting was held at Cleveland, the next at Milwaukee, the third at Chicago, and the last at Toledo.

Inasmuch as it appeared necessary to have some statistics regarding the capital represented by our membership, the volume of business done, etc., and the Secretary not having been able to obtain such information, the majority of the members not responding, the President was authorized to select a suitable person with instructions that totals only should be reported back to the Executive Committee, and that all information should be destroyed.

This was complied with, and the results obtained were very gratifying. The information obtained was of great service to various committees, which later on met with committees of Manufacturers' Association.

Some members, however, object to giving such or similar information regarding their business. On the other hand, I candidly believe that your Executive Committee would be materially assisted by having certain statistics at all times. This matter, I hope, will be taken up at this meeting.

In order to arrange details regarding the affiliation with the Lumbermen's Association, a meeting was arranged during the latter part of February at Milwaukee, Wis. There your Executive Committee had the pleasure of meeting the officers of the Lumber Secretaries' Bureau of Information.

All matters pertaining to the affiliation, as proposed, were taken into consideration, and it was shown that the advantages arising therefrom would benefit all concerned.

At about the same time, a meeting was had with the Association of Portland Cement Manufacturers in the East, and another with the Central Cement Association.

The best of feeling prevailed on these occasions, and resolutions were adopted expressing the senti-

ment, "That it is to the best interests of the manufacturers and dealers that cement should be sold so far as practical through the regular dealer."

At a former time Mr. Addison H. Clarke, of Baltimore, Md., advocated the publishing of an Association Year Book, but action was not taken. I hereby submit another letter of Mr. Clarke, referring to the same matter, and which reads as follows:

"We earnestly hope that the Association Year Book may be published in 1906. This book should contain a brief historical sketch of each firm in our membership. The information would be of great value to both manufacturers and dealers and would act as an introduction to those attending the convention meetings. It would also assist in forming new business relations that should be of great value to our members."

In order to co-operate with the cement manufacturers, we beg to suggest the publication of a Weekly Market Report stating the condition of the cement trade in all the leading business centers throughout the country. This report should state the market price, the supply and the demand and estimated consumption, also the principal brands of cement in use in the various cities. This is in line with work already begun by the Association of American Portland Cement Manufacturers. This report alone would be worth the cost of membership in our Association.

These matters are worthy of your consideration.

A year ago I called your attention to the Retail Lumbermen's Insurance Association. This institution is managed as any other business enterprise, and instead of paying high premiums to the insurance companies, the lumbermen have succeeded in lowering these rates and guarantee their members absolute security. I made it a point to look into this matter closely, and I earnestly believe that the establishment of such an institution and for the members of this Association, would be advisable and profitable.

During the past year I had occasion to meet various members from time to time, and on such occasions was frequently asked why this Association does not admit all legitimate dealers in building supplies, instead of limiting the membership to cities with a population of not less than 15,000 inhabitants.

Hardly a meeting of this Association was held where this matter was not presented. Arguments have been made pro and con. It seems to me that the proper time has come and that this question be settled. As far as I can see, and to eventually obtain the results which we are seeking, this Association has to cover a larger field than we occupy now.

Along these lines, I notice that the same feeling exists everywhere, and the outcome of such feeling will be the formation of state and kindred associations. I am aware that such exist here in the Eastern States.

The latest is the "Illinois Mason Supply Association," organized January 15th at Decatur, Ill. In a circular which I received a few weeks ago, the aims of this Association are set forth as follows:

"To confine the handling of all kinds of builders' supplies in its legitimate channel so far as the retail dealer is concerned, to disseminate to its members any and all legal and proper information which may be of value to any member. The direct competition of the manufacturer or jobber in selling building supplies, such as wall plaster, cement, etc., direct to the consumer is disastrous to the dealer, and should be corrected in the belief of this Association. A price or quotation made by the manufacturer or jobber to a consumer is as bad as a sale."

This Association, as I am informed, will seek affiliation with our National Association.

No provisions, however, are made in our constitution for such case, and I imagine that this is the proper time to provide for it.

The question of affiliation with the lumbermen will undoubtedly be a matter of debate during this meeting.

The finances of this Association are in splendid condition, and I take this opportunity to express my thanks to our treasurer, Mr. Classen, for the many courtesies received from him during the year.

The Executive Committee at its meeting held during October, 1905, arranged that Mr. West, the Assistant Secretary, take full charge of the affairs of this office. Mr. West has done so with credit to himself and to this Association. At former years I have already expressed my hearty appreciation of his good and effective work, and for such reason only I will not do so again at this time.

This meeting closes my career as secretary of this association. It is like parting from a dear old friend. This Association, on the other hand, can now well afford to pay a liberal salary to a secretary who is not personally interested in any of the firms represented here. This change I sincerely

hope will be for the best interests of the Association. And while I step down and out of this office, and from now on will be a soldier in the rear rank, I assure you that my ammunition is not yet exhausted, that I will continue to work for the Association as I have done in the past, and I earnestly hope that I may live long enough to see the aims and purposes for which we are striving carried out.

In conclusion, I desire to thank the President for many favors shown me, the members of the Executive Committee for kind assistance given this office during the year and the members in general for all courtesies shown me and Mr. West.

The report of Treasurer C. H. Classen was then read, showing the membership a healthy condition of the finances of the body. The report was so complete and satisfactory that a vote of thanks was tendered Mr. Classen by the meeting.

An Auditing Committee was appointed according to custom, consisting of Messrs. A. B. Meyer, S. D. Lincoln and Grant Murray. The balance of the afternoon was taken up in the discussion of the operations of the association on "Broader Lines of Practical Reciprocity and the Admission of all Dealers of Good Reputation." After a free-for-all discussion on the subject, on motion, a committee of five was selected to recommend a plan of action for the Association. President Kling appointed the following: Messrs. Gordon Willis, St. Louis, Mo.; Jos. J. Mandrey, Rochester, N. Y.; H. G. Godfrey, Bridgeport, Conn.; D. J. Kennedy, Pittsburgh, Pa., and Harry P. Boyd, Baltimore, Md. The meeting was then adjourned.

TUESDAY EVENING.

The Philadelphians as impromptu entertainers are par excellence, for the vaudeville show was great, and the two hours spent, starting with the high kicker with a cooper's voice, entertained the party so well one of the vice-presidents continued to say, "Higher, higher."

The other acts, composed of the mother-in-law gush talk, coming thro' the rye and all the Berks county jokes, with the somewhat skitty skit, interspersed with the kinetoscope pictures from France, and the running, jumping, fence and swimming acts were as real as if we had been in 'varsities.

The evening was well spent, thanks to the Entertainment Committee, Mine Host Boldt and every Quaker in Pennsylvania.

THE COMMITTEES THAT MADE PHILADELPHIA FAMOUS.

LOCAL COMMITTEE—Wm. B. Irvine, *Chairman*; Chas. C. Cox, *Secretary*; Cyrus Borgner, Walter T. Bradley, Harry W. Gilbert, Geo. A. Sinn, Howard F. Justice, Benj. K. Nusbaum, Chas. Warner, Nelson O. Lyster, James M. Kelley, Edwin DeFrain, F. M. Hoover, F. F. Hineine, J. L. Durnell.

LADIES' LOCAL RECEPTION COMMITTEE—Mrs. Walter T. Bradley, *Chairlady*; Mrs. Benj. K. Nusbaum, *Secretary*; Mrs. J. M. Kelley, Mrs. F. F. Hineine, Mrs. Chas. C. Cox, Mrs. Chas. Warner, Mrs. Chas. C. Fredericks, Mrs. Nelson O. Lyster, Mrs. Cyrus Borgner, Mrs. Howard T. Justice, Mrs. F. M. Hoover, Mrs. Geo. A. Sinn, Mrs. Harry Gilbert, Mrs. Frank D. Cox.

WEDNESDAY MORNING, FEBRUARY 7.

It was 10:30 before the general meeting of dealers and manufacturers was called to order, owing to the fact that the festivities of the previous evening were prolonged till the "wee sma' hours." A paper, which was not without merit, upon the subject of "Waterproof Compound," was read by Mr. Gordon Willis, of St. Louis, written by Prof. S. B. Newberry, of Sandusky, O.

Mr. A. B. Meyer, of Indianapolis, Ind., read an excellent paper on "Methods of Handling Material," as follows:

HANDLING MATERIALS.

BY A. B. MEYER.

Mr. President and Members of the National Builders' Supply Association:

WAREHOUSING MATERIAL.

This subject at first thought does not seem of much importance; but a careful glance will convince all that good warehouses are essential adjuncts to a successful material business.

WAREHOUSE CONSTRUCTION.

In my judgment, the building of material warehouses should be done only after the following vital points, in the order named, are determined—the location and floor height most accessible and econom-

ical for teaming and car handling, size, strength, preservative qualities and style of construction. The location, size and strength are, of course, in all cases governed by local conditions; the most convenient floor height seems to be from two and a half to three feet above ground level, which is a happy compromise between the average heights of wagons and cars, in the interest of economical handling—ample strength and economy of construction is obtainable with frame superstructures upon brick pillars above ground, set upon concrete footings below ground level of depth and size proportionate to strength desired and local conditions involved. This insures perfect ventilation and thus minimizes absorption. Another commendable style of foundation and floor construction, regardless of superstructure, is to build concrete walls to the height above mentioned, fill between with gravel and cinders and top off with a three to four-inch concrete troweled floor. This has proven successful; the floor being smooth, dry and free of splinters, permits saving the contents of all broken packages and economizing space when necessary without fear of overload.

Bulk line house construction has largely been a matter of study and experiment. Several patented houses have been erected with ventilation all around and a small fourteen by fourteen inch opening for taking out the lime. My first one was built at a cost of \$250, and after the first months had the door enlarged to two and a half by five feet for quick



JOHN J. KELLY, VICE PRESIDENT, VICE PRESIDENT NATIONAL BUILDERS' SUPPLY ASSOCIATION, BALTIMORE, MD.

handling. Since then I have built three other styles; one with double inside and outside casing with six-inch space filled with air slacked lime; another using double casing inside and out with air space; and still another entirely of Portland concrete with twelve-inch walls extending from three feet below ground level to the roof. The size of this is eighteen by twenty feet, with an eight-inch solid concrete partition forming two separate bins. The walls of this house sweated and held moisture for a year, but finally dried out and now keeps lime excellently. It is cool at all times and cannot be excelled as a permanent fire proof lime storage house.

WAREHOUSING—It is generally known that the integrity of nearly all warehousable merchandise in the building material line is more or less affected either by direct absorption of moisture or indirectly by it as a vehicle for other destructive or damaging influences, which, in conjunction with natural elements of waste attending careless manipulation, renders necessary persistent application of scientific and practical rules to prevent losing results in these days of almost universal close margins seemingly peculiar to this line.

Of all merchandise handled in any branch of commerce, Portland cement, in my judgment, has become an undethronable king. At first thought, this statement may seem overdrawn, but when one considers what and how it will substitute and how poorly it is substituted, no elaborate detailed defense of the proposition is necessary. Suffice it to say that it is of enough importance to serve my purpose as an example, and in the main the following remarks affecting it are applicable to its warehouse companions. For convenience in handling, economy of space and safety of packages, my experience seems to suggest a system of cross-tiering fourteen bags

high, under such arrangement as to permit of taking out in the order received, to the end that stale stock, stock carrying and consequent wastage is minimized. This done, the next important feature is to have an empty barrel, conveniently located, to daily receive the floor accumulations, which not only saves the cement, keeps the floor clean and the warehouse in general good order, but facilitates the handling of all warehouse contents, and thus curtails expense. The quantity of cement saved in a year by this system will astonish any one who has not practiced it. To illustrate, will say that, in equipping my various yards with office buildings, warehouses, stables, blacksmith shops, coal sheds, etc., have always used the cement thus saved for concrete foundations, pillars and footings, with very good results as to strength, durability and economy.

CANOPY WAREHOUSING—By this I mean warehousing under "God's canopy" (out of doors), or practically so, which embraces the practice of few contractors encouraged by two or three cement companies, which practice, I believe, if continued, will prove detrimental to all concerned in cement traffic; not the least of whom to suffer will be these same contractors (or their bondsmen), who, to save a part of the dealer's paltry profit, jeopardize their contracts by the hazardous storing of large quantities of cement (the one vital element in their operations) in abandoned, almost roofless stables and wood sheds, under tents, and in the open with only one-inch boards between it and Mother Earth; also frequently for weeks at a time in direct contact with the damp ground.

Will any one familiar with the nature of cement and knowing the evils which sometimes obtain even at best, contend that such conditions are conducive to safe results? Surely not, and the question of safety not only involves property, but human lives as well. Who, then, is most interested in minimizing this dangerous and unbusinesslike practice? Certainly the dealers' position is such as to preclude the propriety or good effect of a personal campaign because of apparent selfishness great enough to overshadow the real merit involved in his contentions. On the other hand, the cement companies engaged in this abortion being blind to the danger confronting them and their product, are not likely, until disaster comes, to apply the remedy. It, therefore, appears to me that either the Cement Manufacturers' Association or large private builders, public officials and bonding companies, or perhaps all of them, form the real courts of appeal to be effectively reached through a properly devised medium, emanating from this association.

During the last two years our City Engineer compelled the use of cement in paper sacks for all work in which the city was interested; also requiring two weeks' storage and test before being used. This was a stride in the right direction and operated as a check to many abuses; but would have been vastly more effective for good had he but gone one step farther and specified the proper storage conditions, which was both feasible and proper as an eliminator of trouble and expense in his office, also warranted as a public safeguard.

Begging a moment or two of your indulgence for remarks slightly divergent from the main subject, but somewhat pertinent thereto, I will venture a few words on the following subjects:

MATERIAL DELIVERIES AND PAPER VS. COTTON SACKS.

WHAT CONSTITUTES A DELIVERY—Believing that all material dealers not protected by a schedule of agreed rules are victims of pretty much the same impositions attending deliveries that we are in Indianapolis, and assuming that the burdens thus needlessly inflicted are as keenly felt elsewhere, I am tempted to ask of this Association the question this topic implies, namely, "What constitutes a delivery?" and thus make it a subject of general discussion for the purpose of eliciting authentic knowledge as to general practice from which might evolve ways and means to determine the question asked, and thus provide a wholesome remedy for the evils involved.

COTTON SACK NUISANCE—I wish to avail myself of this opportunity of going on record as being in hearty sympathy with the recent concerted action of Portland cement companies, regarding the treatment of cotton sack shipments, which, logically and honestly carried out, throws the burden of expense on the consumer, where it rightfully belongs. Everybody in the cement traffic is so thoroughly familiar with the many phases of burden, contention and bad blood involved as to preclude the necessity or propriety of indulging in details, therefore I will content myself with the statement that, as common distributors of cement, our fervent and persistent prayer should be that all existing cement companies, as well as the future comers, not only subscribe to, but perpetually maintain the principles of this new rule, to the end that paper sacks may entirely supercede the cotton.



A GROUP OF DELEGATES TAKEN ON THE STEPS OF THE HISTORIC UNITED STATES BANK.

Mr. President and members, accept my thanks for your kind indulgence.

Secretary Richard Kind, in his very able paper, which has been christened "A General Review of the Association Work, Past, Present and Future," was the next feature which consumed the morning session. The paper brought out a general discussion which lasted up till the hour of adjournment. Owing to pressure of space, Mr. Kind's review is omitted for the present, but we will have the pleasure of presenting it to our readers in an early issue of ROCK PRODUCTS.

WEDNESDAY AFTERNOON, FEB. 7th.

Immediately after roll call President Kling introduced Mr. J. E. Challenger, the head of the Philadelphia Car Service Association, who discussed the subject of "Car Service Regulations From the Railroad Point of View." Mr. Challenger was a forceful but at the same time pleasant talker, and freely invited the delegates to fire their questions at him, and proved himself to be a thorough master of the subject in hand by the pleasant and capable manner in which he caught and returned every bomb that was tossed toward the platform.

Mr. E. C. Kissenger, of Columbus, O., then presented the subject of "Car Service Regulations From the Shipper's Point of View," and by incident and argument he pointed out the places where improvements could possibly be inaugurated. This debate is too good to be curtailed, and will be presented in this department of "Rock Products" in full at an early date.

The discussion of the car service question waxed warm and consumed the balance of the afternoon session, Mr. Dingley, Mr. Kind, Mr. Bradley, Col. Irvine and Mr. Spinks taking a prominent part in the discussion.

THE SMOKER.

In the ball room the greatest smoker ever pulled off insured the several hundred delegates a pleasant evening. The party was seated at tables, where a pipe of peace (made in France) was furnished with perique tobacco and a box of general Fireproof Company matches, later a pitcher or two of beer just from the brewery gave us something to do instead of playing thumbs up, as if we were wooden Indians; but we were all sitting up and taking a look for the program prepared by "that bob up serenely" committee was good, not fairly so, but grand. It was a yo'dville show, so the visiting was plentiful. The social chats behind the posts made a lot of people money, but that was what we were there for, and the night was well spent.

Here's what was provided:

Selections Orchestra
Tenor Solo Emmett J. Welch
Hebrew Specialties Harry Philibert

The Human Top (from Palace Theater, London) "Omar"
Illustrated Songs Mr. Welch
The Dashing Soubrette "Mme." Shaw
Twentieth Century Necromancer Prof. Ramsteen
Comedy Singing and Dancing Al. White
Character Impersonations Edward J. O'Keefe
Mounted Club Jugglers Ader Trio
The German Band Leo St. Elmo
The Aristocrat and Coon James and Davis
Frank Kienzle, Accompanist.

If you were not satisfied, a rain check was furnished and signed by Ching Hung Lang and your Uncle Peter Degnan, of Toledo.

THE LADIES ENTERTAINED.

The Entertainment Committee provided for the afternoon and evening, but most of the ladies did their skating of the meeting on the roof of the Bellevue-Stratford in the morning. The party saw "Fantana" at the Lyric Theater in the afternoon, and a beautiful "euchre" was given, with some sixty ladies present. It was 11:30 before the last bell tapped and the winners announced. Mrs. Ella Kelley, of Baltimore, captured the first prize.

Mrs. Frey, Mrs. Boyd, Mrs. Spinks, Mrs. Bradley, Mrs. Murray, Mrs. Kling, Mrs. Nausbaum, Mrs. Scott, Miss Kelley, Mrs. Little, Miss Kelley, Mrs. Bye, Mrs. Zipperline, Mrs. Tyson and Miss Anna Graft were also prize winners.

After the distribution of favors, the party were served luncheon, and a pretty sight it was to see the ladies, all gowned for the occasion, seated about the room, telling how it happened. They voted that the gentlemen of the committee were jes' too lovely, and voted that their assistants, Messrs. Kelley, Boyd and Harry Classen, of Baltimore, were real Southern gentlemen.

THURSDAY MORNING, FEBRUARY 8th.

It was hard to get the delegates together for the morning session, and it was ten o'clock before the gavel fell. The reports of the Auditing and Resolutions Committees were presented and all the unfinished business of the convention was dispatched and the politicians got busy after President Kling, in a touching speech stated that it would be impossible for him to serve in that capacity another year. The result of the election was as follows:

President.

Gordon Willis, St. Louis, Mo.

Vice Presidents.

H. C. Godfrey, Bridgeport, Conn.; Chas. Warner, Wilmington, Del.; C. O. Perkins, Des Moines, Ia.; A. W. Eisenmayer, Granite City, Ill.; D. L. Mather, Richmond, Ind.; T. W. Spinks, Covington, Ky.; John J. Kelley, Baltimore, Md.; Jas. G. Lincoln,

Boston, Mass.; S. A. Norman, Grand Rapids, Mich.; W. P. Cockey, Minneapolis, Minn.; Howard McCutcheon, Kansas City, Mo.; H. P. Cook, Newark, N. J.; M. A. Reib, Buffalo, N. Y.; E. C. Kissinger, Columbus, Ohio; Grant Murray, Pittsburg, Pa.; B. L. Grove, Washington, D. C.; R. W. Marshall, Wheeling, W. Va.; C. P. Flatley, Green Bay, Wis.

Treasurer.

C. H. Classen, Baltimore, Md.

Secretary.

Richard Kind, Toledo, Ohio.

Assistant Secretary.

Harry S. West, Toledo, Ohio.

Executive Committee.

Executive Members elected for two years:

H. B. Lyman, Lafayette, Ind.; W. W. Coney, Cincinnati, Ohio; Chas. Weiler, Milwaukee, Wis.; Wm. B. Irvine, Philadelphia, Pa.; F. Wright, Chicago, Ill.; Richard Kind, Toledo, Ohio.

The new officers were roundly cheered and several invitations were received from various cities extending their hospitality for the next annual convention in February, 1907. Chicago made a strong bid, but the matter was finally left in the hands of the Executive Committee to be announced the last quarter of the coming business year. The slate having been cleared, the convention adjourned in peace and harmony, sine die.

THE WHITEHALL EXCURSION.

Where the Supply Men Visit Cementon as Guests of the Whitehall Portland Cement Company.

Before the date fixed for the Philadelphia convention, an invitation to visit the great plant at Cementon had gone out from the enterprising sales department of the Whitehall Portland Cement Co., in the Land Title Building. On the first day of the convention it became evident that Mr. Howard B. Green, the manager of sales, had summoned the best talent on his staff to assist in the reception of the delegates. Sam J. Vail, who is personally acquainted with nearly every dealer in the country; H. F. Rausch, from Ohio, and E. G. Brick, from New England, and Charles P. Robinson, from the New York office, made spots of pleasure wherever they were found with the bright red button of the Whitehall for a center.

Mr. Andrew J. Maloney, the traffic manager, practically shut up shop and joined the Entertainment Committee, with H. F. Werle and J. Q. Maloney from the office. Among the other cordial things that these gentlemen were communicating to the visitors was an invitation to "Meet me at the Reading station at ten o'clock Friday morn-

ing." Now, if there is anything that a full-fledged American citizen delights to receive it is an invitation. Have you ever noticed that soft light that comes in the back of a man's eyes when you invite him to participate in any festal occasion? To the builders' supply man the opportunity to visit a real cement plant in the great Lehigh Valley district, and one where they have no secrets to deceive you with, but want you to know all that you are able to absorb about the manufacture of the highest quality of the most interesting rock product that is offered to the dealer to-day, it is easy to see how it was appreciated.

The badge of the invited guest was the red Whitehall button, and on the morning of February 9, long before ten o'clock, the waiting room of the big Reading station was dotted and specked with red buttons in the crowd, and the Whitehall Entertainment Committee, who never grow weary, were all on hand.

It was a special train chartered for the occasion, and consisted of a refreshment coach and three traveling coaches. This is not meant to insinuate that the refreshment coach did not travel, for there was considerably more rapid transit in connection with the refreshment coach than any other.

It was a happy crowd. Even the conductor and the flagman joined in the fun, and the honest Reading conductor refused to take any of Charlie O'Donnell's gold money till he found it was the kind he could not spend, and was not tainted in any way.

At Allentown we got a new conductor, and it didn't take him long to catch on to the fact that the special to Cementon, which was covered with the banners of the Whitehall Portland Cement Co., was a jovial, go-as-you-please excursion, and it really must have been hard upon him to contemplate that he was the only man in the crowd who was actually working and personally responsible for the safety of such a bunch.

There were four ladies in the party, the Whitehall girls from the Philadelphia office, and they helped to entertain as well as the balance of the force. Nobody was in a hurry, for they were having such a good time on the train that there was no anxiety about breaking the record for speed. It was impossible to count the crowd any more than you could count the number of bees in an acre of buckwheat, for if there was anybody still for over a minute, Andy Maloney, Howard Green or Sam Vail would get nervous and stir things up. The conductor says it takes about sixty people to a coach, so with a hazy idea that there was something like two hundred, the arithmetics were all thrown out of the window.

Being a special train, there was no newsboy aboard, which was a grievous oversight, but the gap was quickly filled by the irrepressible George Heppenstall, who went from coach to coach proclaiming his wares as follows: "Mornin' papers! Latest song of the day—'Cementology'—words and music by Howard B. Green!" George made every-



GREAT BLAST IN THE CEMENT ROCK QUARRY, VIEWED BY THE VISITORS FROM A SHED LOCATED TO THE LEFT AT A SAFE DISTANCE.

body buy, because he is a good salesman, and Cementology was the subject in everyone's mind, anyhow.

About the time the train reached the great steel plant of Bethlehem, the refreshment car began sending out delicious chicken sandwiches, pickles that you would love if you were not in love, piping hot coffee, and in the refreshment car there was an unlimited supply of the best brews of the Quaker City and Pennsylvania rye in bottles bearing the inscription "No. 6" in red letters that is said to be by drinkers almost as good from the whisky standpoint as Whitehall cement is from that point of view. Robert Coane, the man who makes this whisky, was aboard the train. He used to sell cement many years ago, and he knew that quality is an essential feature to a Whitehall excursion. M. A. Rieb and E. N. Croll, of Buffalo, liked the quality of the goods, anyhow. Just about the time you couldn't eat any more the train pulled into Cementon, where Mr. Thomas W. Richter, the president of the company, and William E. Erdell, the general superintendent of the works, met the party, and two more ladies of the office of the works also joined the crowd.

It was a short tramp through mountain passes to the quarry where cement rock is secured. The quarry resembles an enormous gash in the side of the mountain, and there were steam shovels and

tram cars that run automatically to the crusher, representing collectively an immense quarry equipment.

With that forethought that is characteristic of all the operations of the Whitehall Company, a temporary shed had been constructed for the protection of the visitors, and Mr. Erdell explained that we were to be treated to the sight of a great blast in the face of the quarry.

The drills had all been removed, and Mr. Erdell's explanation was as follows: "The stone about to be blasted lies between the two red flags, the distance between the flags is 250 feet, and the ledge to be blown out is eight feet wide. The load consists of 1,000 pounds of dynamite placed in thirty-five holes, three and one-half inches in diameter, and sixteen feet deep. The charges will be exploded by two electric batteries, and the quantity of stone that will be removed is about 2,500 tons."

After everybody was safely housed under the shed, Mr. Erdell gave the signal, and instantly the great spectacle was accomplished. The photograph man was on hand, and as soon as the smoke cleared away he made a picture of the majority of the visitors standing upon the broken stone that was the result of the blast.

Then following the tramroad, in single file, the party went through the entire works, beginning at the crusher end where the rock is ground, to the



A GROUP OF THE VISITORS IN THE QUARRIES JUST AFTER THE GREAT BLAST—INCIDENT OF THE WHITEHALL EXCURSION.



EXCURSION TRAIN ABOUT TO LEAVE THE WHITEHALL PORTLAND CEMENT CO.'S PLANT AT CEMENTON, PA.

chambers where the tube mills further pulverize it, on to the kiln rooms where the raw material is converted into clinker, and then to that noisy department where half a hundred Griffin mills convert the clinker into Whitehall Portland cement.

The packing department is an interesting feature, for every bag of cement must pass over the scale before it is loaded on the cars for shipment, and the loading platforms are long enough to accommodate forty cars at one time.

In short, the visitors viewed every part of the process of manufacture from the blasting in the quarry to the bill of lading that goes out with the car.

After visiting the chemical laboratory and the offices of the works, where George Heppenstall insisted on making a speech, the party returned to the train, which was waiting on the siding, and the party re-embarked for Philadelphia, after considerable delay in rounding up the stragglers who had stopped at the various points of interest.

It was almost dark when the party arrived in Philadelphia, and there was not a member who did not express great satisfaction and pleasure with the splendid entertainment, the educational features of which are not by any means to be overlooked.

The Whitehall Company was the first of the great cement mills to renounce any idea of secret processes in the manufacture of their cement. They have always invited their customers to come and see how they make it. Mr. Righter, the president of the company, said: "We are glad to have any dealer or consumer of cement to come and see that we exercise every care and overlook no improvement to produce the most excellent product possible by the best obtainable equipment directed by the highest type of human skill, and this is all the guarantee of quality and uniformity that can be offered. It is our unbending policy, and we are glad to let it be known everywhere."

The Whitehall Company has but one mill, they make but one grade, and it is sent out under one brand only, and their study is to make it always the best, so that they are entitled to paraphrase the personal motto of the redoubtable Marshal of Kentucky, who used to say, "I acknowledge few equals and no superiors."

NOTES OF THE MEETING.

Col. Cobb, of St. Louis, denies that he went skating with John Kling and Dick Kind on the roof, but nobody believes either of them.

George S. Heppenstall, of Pittsburg, can keep three engagements at one time and everybody satisfied.

The youngest man in the Association, Col. C. H. Little, of Detroit, was in his usual good spirits. He says he has recently been building a plaster plant.

Genial Harry West was pretty busy all the time, but with all of that he managed to enjoy himself, for he is a natural born mixer.

R. W. Marshall, of the Wheeling Wall Plaster Co., was the last delegate to leave Philadelphia.

Jake Urschel, of hydrated lime fame, was telling the delegates about his big plant at Woodville, O., and incidentally talking up his bag proposition.

R. S. Rhoads, of the American Sewer Pipe Co., from Columbus, Ohio, says they are making more sewer pipe than ever, in spite of the fact that they lost one of their mills recently by fire.

Charlie Wieler, of Milwaukee, admits that he likes to linger among the good fellowship of the Quaker City, so he was in no hurry to go home.

Albert D. Warner and H. O. Duerr represented the Chas. Warner Co., of Wilmington, Del. They say that Charlie Warner is enjoying the salubrious climate of Florida.

The new publicity profit of the Atlas Company has gotten out a new book on concrete construction that is well worth looking over, and the red book demonstrates the uniformity of quality of the Atlas brand.

Capt. Riley, of the Logan Brick Manufacturing Co., Toledo, Ohio, had a few words to say about vitrified pavers that was interesting to the dealers in the Middle West.

The Wm. G. Hartranft Cement Co., Philadelphia, distributed a date book as a souvenir to assist the delegates in keeping track of themselves. The cover was decorated with Old Dominion, Phoenix and Buckhorn symbols.

Edward Bogk, of the Ricketson Mortar Color Concern, of Milwaukee, explained the color of everything to the delegates.

Charlie O'Donnell, of the Buckeye Portland Cement Co., had a barrel of gold money with him, and the best part of it was that you couldn't spend it so when he gave you a couple of twenties you could always find something to jingle in your pocket. It certainly helped some.

The Bath Portland Cement Co., of Pennsylvania, presented the delegates with a handsome memorandum book.

The biggest man at the convention was Brady, of Braddock, Pa.

F. J. Van Allen is a jolly Michigander who lives at Jackson. He makes sewer pipe and sells it by the yard or mile, according to the customer's desire.

Chairman Irvine, of the local committee, was the busiest man in Philadelphia during the convention.

The Pennsylvania Cement Co., of New York, furnished the delegates with cement paper weights.

The Granite Clay Product Co., of Akron, Ohio, with their well-known liberality, gave away a pipe and something to put in it to every one present. The sewer pipe business is their line.

The Bostwick Steel Lathe Co., of Niles, Ohio, by its president, Mr. Wm. G. Hurlbut, was giving out a memento in the shape of a handy little manicuring tool to remind the delegates of their high grade steel lathe and expanded metal.

The sales department of the Whitehall Portland Cement Co., worked overtime in the entertainment of the delegates, headed by Howard B. Green, the manager of sales, and Andrew J. Maloney, the traffic manager, besides Sam J. Vail, the well-known Western representative, who is just moving into larger undertakings in the East; H. F. Rausch, of Columbus, Ohio; Edward G. Brick, who works in New England, and Chas. P. Robinson, of New York.

All of these wore the well-known red Whitehall button, and lots of their friends likewise followed suit, so that Whitehall was always in evidence.

President Avery and Secretary Fulton, of the United States Gypsum Co., of Chicago, not satisfied with having a big meeting of their sixty salesmen at their home office, enjoyed talking it over with their many customers.

W. H. Harding is now vice president and general manager of the Coplay Cement Manufacturing Co., with offices in the Pennsylvania building, Philadelphia, and J. T. Twomley becomes the general sales agent of the company.

Duane E. Minard, representing the Stowell Manufacturing Co., had a watch fob souvenir with a classic head on one side and a card of the famous Monarch brand roofing material on the other. Even the ladies were pleased to receive them.

A full force of the Atlas Portland Cement Co. was steadily doing duty on the local Reception Committee, including both Messrs. Kimball and Boyer.

The ladies of the local Reception Committee certainly covered themselves with glory in the entertainment of the visiting ladies of the convention. There were automobile rides about the best paved city on earth, Old Independence Hall was visited, the Old Swedes church, Cramps' shipyard and beautiful Fairmount Park. There were card parties and suppers in the grand parlors, and skating on the roof was one of the features not to be forgotten. Most of the ladies went to Wanamaker's, where they shopped and had a first rate female time; at least, they so expressed themselves at every opportunity.

Mr. George Gengnagle and wife, of Dayton, Ohio, left immediately after the convention to spend a month in the summer West Indies, taking in Jamaica and many other points of interest.

Mr. and Mrs. Kling, Cleveland, Ohio, will spend a month in Florida.

Uncle Pete Degnan, of Toledo, says he is going to Ireland for a short visit to the old sod.

J. R. Haigh, Sidney, Australia, was the only foreigner at the meeting.

Father Lauman, of Pittsburg, was mixing quietly with the delegates.

The Lehigh Portland Cement Co. was represented by a full force headed by Chas. A. Matcham, the general manager; Secretary Sykes, Treasurer Young, President Col. Trexler, George Ormond and others.

Gordon Willis, of St. Louis, is a modest man, and blushing received the honors showered upon him in his election as the president of the association. The unanimity of sentiment in his favor was the cause of his accepting the high honor to which he was chosen.

Richard Kind was re-elected secretary, of course. He was hardly consulted about the matter—they just voted for him without allowing any coy speech, although he was bubbling over to deliver one. It makes no difference to Dick, anyhow, for Harry West does all the work.

Ralph Peverley was conspicuous by his absence. He is now a full-fledged caterer in New York.

Chas. R. Johnson, Beau Brummell of the cement trade, of the Castalia Portland Cement Co., was voted one of the handsomest and most popular men at the convention. He was accompanied by George W. Hackett, and his son G. D., who, by the way, is a student at the University.

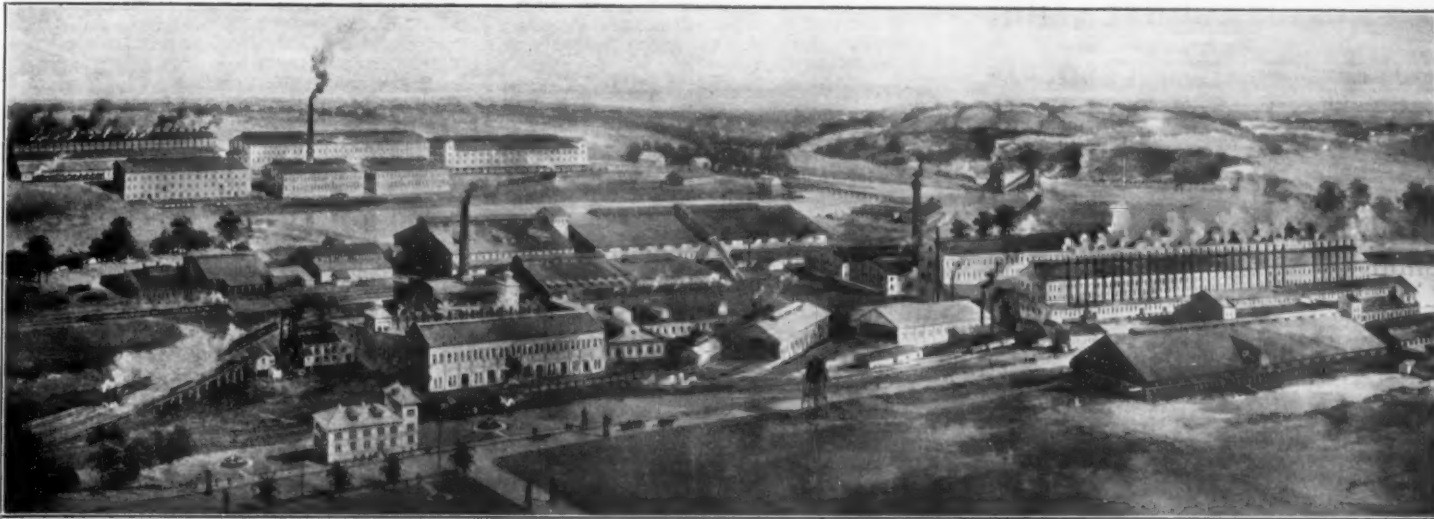
Dr. Hoffman, of Lorain, Ohio, is just as much interested as ever, and more quiet.

C. P. Flatley, of Green Bay, Wis., was carrying a cane. He kept so in the background, lots of us didn't have a chance to visit him.

Ira O. Goodrich, of the Goodrich Cement Co., Boston, made many old friends. This being his first national meeting, he enjoyed every minute of it. He was accompanied by his son, E. H. Goodrich, of Syracuse, representing the Mack Manufacturing Co.

S. D. Lincoln, of Washington, D. C., tells a good story on "Pop" Long, illustrating the fact that he is growing older all the time. I don't think Lincoln ought to give him away, after "Pa" settled with him.

The ROCK PRODUCTS DAILY got Jos. P. Manley down as Mouseley, but Joseph never complained, because it said he was home building a nice new house, which we later hope to illustrate in the paper.



WORKS OF THE ATLAS PORTLAND CEMENT CO., AT NORTHAMPTON, PA., LARGEST PLANT IN THE WORLD.

Grant S. Murray, the new vice president of the Pennsylvania, located in Pittsburg, was one of the most popular men present.

Apted, of the Grand Rapids Co., was there in full force, but we missed Secretary James Lean-houts.

Willie Winkle Bell, of the Pennsylvania Cement Co., had Bill Penn and cement all over the place. I wouldn't be surprised if he don't get business everywhere for Pennsylvania. He is a hustler.

Whitehall buttons were in evidence everywhere

That Boston delegation, with Lincoln, Goodrich and Davis on the firing line, can certainly give plenty of pointers to the United States in builders' supplies.

A. A. Pauly, who, with a big factory of cement block, wall and other machinery, is accustomed to big things, said he took off his hat to the Atlas people when he found out the size and arrangement and make-up of their institution.

The many friends of John A. Kling, the retiring president, appreciate more than ever the many good things done for the good of the organization by this hard-working ex-president. We regret that he would not accept a place on the executive committee.

Col. Cobb, one of the retiring officers of the executive committee, left before the convention was over, owing to the fact that Mrs. Cobb was sailing for Europe.

Dougan, secretary of the Acme, of St. Louis, seemed to enjoy himself. He is going to visit the big commercial centers of the East before returning home.

The American Roller Mill Co., of Middletown, Ohio, was well represented, not only by the assistant secretary, George M. Charles, but also by their Eastern representative.

The whole delegation, except Billy Holz, was out.

Jesse O. Freeman, once a citizen of Pennsylvania, now of Illinois, was missed among the sewer-pipe men, for Jesse knew them all, and all were pleased to know that his new sewer-pipe factory in the West will soon be finished.

S. L. Avery, president of the U. S. Gypsum Co., of Chicago, visited Boston following the convention. He is planning for a big year for the U. S. G.'s goods in 1906.

Andy Robinson and his partners, of Newarkville, Ohio, were careful not to take any ice-houses home with them this time.

Col. R. C. Brown, of Oshkosh, Wis., makes a fine associate editor. When he gets tired making millions out of the lime business, he says he is going to connect himself with Rock Products. He went to Washington after the convention to look up the architect business there, and incidentally shake hands with the Washington delegation in Congress.

Campbell and Riley, of the New Jersey Association, were the chief cook and chaperon, and made things resound with their oratory after Rock Products came out and said they weren't present.

The hydrated lime specialists were all on hand. You could see Jake Urschel most any time you looked about.

Mr. F. L. Kane, Jr., of the Sackett Plaster Board Co., of New York, enjoyed meeting with a number of his customers and his Western co-worker of the Grand Rapids Plaster Co.

Col. J. H. Shea, of the Chicago Belting Co., looked in at the meeting of the Builders' Supply Association at Philadelphia. He was accompanied by Manager Toogood, of Philadelphia.

The next meeting of the New Jersey Mortar Supply Association will be held about the 28th at Newark. This organization is not very old in years, but it has 100 members and 30 associate members. Secretary Riley, who is secretary of a number of other associations, and, incidentally, secretary of the Board of Trade at Newark, is one of the liveliest organizers in the country, and with his co-workers among the lumbermen, this organization practically ought to have every builder's supply man in the State interested. If you get Campbell or Cook started about association matters, it is all off.

We are told that Dr. Bachmann, who was formerly connected with the cement business in the Lehigh Valley and has an excellent plant in California, has recently purchased land near Nazareth, Pa., and will put up a 5,000 barrel plant to manufacture cement.



A TOAST TO OUR HOST!

The Atlas Portland Cement Co. added to the pleasure of the delegates at the Philadelphia meeting the day following adjournment by inviting their sales agents to participate in a trip to their plant at Northampton, Pa. This is noted as the largest cement manufacturing plant in the world and we take pleasure in printing a picture of same. The party were entertained by the management and all enjoyed very much the opportunity to visit this splendidly equipped and well arranged institution.

Moral Side of Builders' Supply Convention.

EAST ORANGE, N. J., February 16.—Mr. Duane E. Minard, in speaking of the convention of the National Builders' Supply Association, at Philadelphia, said:

"It was not difficult for those present at the recent convention to observe the many and extensive benefits to be derived therefrom. The thorough and intelligent discussion of practical questions brought out the difficulties encountered in each separate locality and afforded suggestions from those who had successfully overcome them and accomplished a better mutual understanding of the conditions and improvements existing and achieved in this important branch of trade.

"It has not been many years since manufacturer and dealers could not discuss, in an amicable manner, the differences existing between them or their mutual difficulties, and if such a discussion was attempted, it resulted only in bad feeling which widened the breach between them. The names of customers and methods of doing business were trade secrets. Flagrant abuses of confidence, when it was reposed in a competitor, was the order of things.

The moral standard of business men has considerably improved and no more positive proof of this fact could be secured, than to note the character of men representing their various companies at the convention. They indulged in a full and free discussion of their respective business difficulties and improvements, and all participated. Manufacturer and dealer were harmonious and seemed anxious to facilitate each other's business by mutual understandings. The largest and most successful manufacturers seemed to be those who admitted reputable dealers into their business families as local distributors and protected them. This arrangement is manifestly advantageous to both parties.

"The general tone of business conduct is evidently much benefited by such organizations as the National Builders' Supply Association, and it is to be hoped that their organization will be more universal for they render business conditions much more pleasant and business relations infinitely more agreeable. It may have surprised some of those present to see the brilliant and extensive array of ladies in attendance. This was the most marked indication of moral advancement. The business man is prone to overlook the ladies in connection with business matters, but upon this occasion it was to the contrary. The 'Eighth Annual Convention of the Builders' Supply Association' will be looked forward to with much interest and happy anticipation."

KANSAS CITY CONVENTION

The Display Feature—Cement, Lime, Gypsum, Plaster, Roofing, Stucco and Other Manufacturers Present.

The Southwestern Lumbermen's Association met at the Midland Hotel, Kansas City, Mo., January 24 and 25. There were nearly fifteen hundred delegates present and it was probably the most successful meeting in the history of the association. Much of the work done by the lumbermen will of course not be of any interest to our readers, but as a great many of them are dealers in lime, cement and building materials, they will be interested in the association proceedings. In so far as they touch upon these subjects. Many of the cement, lime, gypsum, plaster, roofing, stucco, and other manufacturers were represented by exhibits, and in addition several cement block machine and brick machine manufacturers had displays. A party of 150 of the lumbermen and their wives left at the conclusion of the meeting for a ten days' trip through the South and to Cuba.

Among the exhibitors were the following:

Elastic Pulp Plaster Co.; H. F. Watson Induroroid Roofing Co., of Chicago, represented by J. F. Hicks; Peerless Brick Machine Co., Minneapolis; Trinidad Asphalt Manufacturing Co., manufacturers of Maltoid roofing; Miracle Pressed Stone Co., of Minneapolis; Devco Paint Co.; Iola Portland Cement Co.; Western States Portland Cement Co., Independence, Kan.; United States Gypsum Co.; Plymouth Rock Cement Plaster Co., of Fort Dodge, Ia.; United States Sash and Door Co., of Wichita, Kan.; Kansas Portland Cement Co.; Paraffine Paint Co., of San Francisco; Agatite Cement Plaster Co.; Rogers White Lime Co., of Rogers, Ark.; Jackson-Walker Coal and Material Co.; Heppes No-Tar Roofing Co., of Chicago.

Mr. R. Z. Todd, secretary of the Fay-Todd Lumber Co., of Muskogee, I. T., was present at the meeting. They are well known dealers in lime, cement and building materials.

The Acme Cement Plaster Co., St. Louis, Mo., had a display in charge of Mr. James R. Dougau, the secretary and treasurer of the company. Mr. M. M. Briggs was also present in their behalf.

The Lehigh Portland Cement Co., of Allentown, Pa., had a display of their products and presented to every visitor a very handsome oxidized silver match case which was very much appreciated.

The St. Louis Portland Cement Co., manufacturers of the well known Red Ring brand, had a display in charge of Mr. A. H. Craney, their general sales agent, assisted by Mr. A. Baumberger.

Mr. J. F. Gudgeon represented the Forest Lumber Co., of Webb City, Mo., at the convention. His firm also deals in lime, cement and builders' supplies, they having sold 2,000 barrels of cement last year.

Kemplin & True, of Gates Center, Kan., were represented at the Convention. They are well known dealers in lime, cement and builders' supplies, handling the well known Ash Grove lime and Portland cement.

The Barret Manufacturing Co., of Kansas City, Mo., manufacturers of roofing material, building paper and coal tar products, had a very interesting exhibit in room 103 in charge of Mr. L. M. McFarlin.

Mr. F. F. Freeman, treasurer of the Rogers White Lime Co., of Rogers, Ark., manufacturers of the well known Lily lime, was in attendance. This lime is 99.77 pure. Mr. Freeman was one of the most popular delegates at the convention.

Col. W. A. Raupp, of Peirce City, Mo., proprietor of the well known Peirce City Lime Co., was in attendance, and his Peirce City White Lime went up several points in the estimation of all those with whom the genial Colonel came in contact.

F. W. Bird & Son, of Chicago, manufacturers of sheathing paper, deadening felt and roofing, and whose factories are located at East Walpole, Mass., had a display and presented to all callers a very handsome little leather match safe, which was very much appreciated. Mr. W. E. Rhine was in charge of the exhibit.

Mr. E. L. Roll, of the Roll Coal and Lime Co., wholesale and retail dealers in lime, cement, plaster, hair, mortar colors and builders' supplies at

Twentieth and Main Streets, Kansas City, Mo., was on hand at the convention and made many friends for his firm. He was one of the party who made the Cuban trip.

The Sall Mountain Asbestos Manufacturing Co., of Chicago, manufacturers of the Miko rubber roofing also had a display. Miko rubber roofing is the original flint coated roofing. It is suitable for any building and is strong, tough and durable. No coal tar is used in its manufacture, and it is not affected by the weather.

The Hannibal Lime Co., Hannibal, Mo., manufacturers of the well known Bear Creek white lime and dealers in cement, plaster and hair, were represented at the convention by Mr. John E. Jones, Jr., vice president and manager. Mr. Jones presented his friends with a souvenir letter clasp which was much prized.

The Peerless Brick Machine Co., of Minneapolis, Minn., had one of their machines on exhibition making bricks at the rate of ten per minute. The Peerless is one of the simplest, strongest and best brick machines on the market. The display was in charge of Mr. L. V. Thayer, the president of the company, assisted by Mr. P. Murphy.

The Plymouth Gypsum Co., of Fort Dodge, Ia., manufacturers of the well known wood fiber and hard wall plaster, had a display of their products upstairs. They gave away as souvenirs a handsome pencil, a celluloid back memorandum book and a very handsome ruler. Mr. F. M. Cougill was in charge of the exhibit and made many friends for his firm.

F. O. Gulley, the vice president and general manager of the Ozark White Lime Co., manufacturers of the well known Crescent, Clear Creek and Uncle Sam brands, of Fayetteville, Ark., was in attendance. Mr. Gulley was always the center of an interested group as he is one of the best story tellers living. He was one of the delegates who made the trip to Cuba.

The Iola Portland Cement Co. had a display in charge of Mr. E. R. Stapleton, their general sales agent, assisted by Mr. J. E. Edwards, W. I. Sterling and Mr. J. A. Wheeler. Their display was in rooms 121 and 122, where good cigars and good cheer was dispensed. Mr. Stapleton says they are running their mills full capacity and are still unable to meet the demand.

The Heppes Co., of Chicago, manufacturers of the No-Tar Roofing, had an exhibit in charge of Mr. H. W. Binnie, the president of the company. No-Tar is a roofing in rolls made from the strongest wool felt-soaked and coated with the most durable water proofing agent known, and rendered as fire and weather proof as a cement pavement by a coating of flint, permanently incorporated on the weather side of the sheet. Mr. Binnie took great pleasure in explaining the merits of the No-Tar roofing.

The Miracle Pressed Stone Co. had an exhibit on the fourth floor in charge of Mr. R. O. Miracle, assisted by Mr. Chas. W. Bayless, the Missouri man, whose headquarters are in St. Louis. Mr. George Birmingham, their Kansas representative, and Mr. C. Russell their Nevada representative. Their exhibit was very interesting and about 1,000 bricks were made during the convention. They also had on exhibition their sewer pipe machine and their block machine, and also a large quantity of their manufactured products.

The Kansas Portland Cement Co., of Iola, Kan., manufacturers of the well known Sun Flower brand, had headquarters on the parlor floor in charge of Mr. W. S. Goodin, the secretary, Mr. L. Northrup, treasurer; Mr. D. B. Allison, sales and traffic manager, and Mr. H. C. Koch. This concern has rapidly gone to the front and will shortly build another factory at Independence, Kan., which will be completed next May. This has been made necessary by the fact that their Iola plant has been unable to meet the demands made upon it.

The Elastic Pulp Plaster Co. had a very unique display showing the varied uses to which their material can be put. One of its qualities is its great adhesiveness. It is used as a covering for boilers and pipes in place of asbestos and is fire proof. When used with a lamp black mixture $\frac{3}{4}$ of an inch thick it makes a very nice blackboard suitable for use in schools. It requires no sand, no lime, or hair. The display was in charge of Mr. Thomas Kelly, the secretary of the concern, assisted by Mr. D. O. Durfee. Their factory is located at South McAllister, Ind. Ter.

The United States Sash and Door Co., of Wichita, Kan., had an exhibit in charge of the following gentlemen: Robert C. Edgar, Robert Finlay, Ralph Mitchell, C. V. Larriman, H. B. Young, A. L. Salter and H. W. Constant. This firm, in addition to handling sashes and doors, also deals in paint, roofing, plastering hair, roofing cement, and other building materials. Their band of thirty-eight pieces made up of employees of their company were on hand at the convention and made things lively.

The very handsome souvenir badge of the Southwestern Lumbermen's Association was made for and presented with the compliments of the Ash Grove White Lime Co., manufacturers of their well known Ash Grove White Lime, Kansas City. The lower part of the badge is an oxidized silver medallion with a beautiful woman's head in relief, and will no doubt be preserved by many of the delegates to adorn their watch fobs. Mr. W. B. Hill was at the convention and did much toward seeing that the delegates got everything that was coming to them.

The Independence Gypsum Co., of Southard, Okla., had a display of their well known products, including their Golden Seal plaster. They presented to every visitor a very handsome souvenir plaque showing in relief their immense plant, which has a capacity of 300 tons per day. They make everything manufactured from gypsite and gypsum products. They have one of the purest deposits in the country and their new mill is absolutely up to date and every pound of material shipped is inspected by a chemist. The display was in charge of Mr. W. M. Stolz and Mr. F. P. Sutherland.

The Salina Cement Plaster Co., Lawrence, Kan., had a display of their well known Agatite Cement Plaster. They gave away a very handsome souvenir pocket book of Russia seal leather. They claim that their cement plaster is a natural cement mined from the earth, where it is found in deposits of such uniform mixture of divers materials so nearly perfect in its natural state that it does not require the addition of chemicals and other ingredients to improve it, as is the case with so-called cements manufactured with plaster paris as a basis or from gypsum rock. Mr. B. A. Williams, the general sales agent, was in charge of the exhibit.

The Western States Portland Cement Co., of Independence, Kan., occupied rooms 124, 5 and 6. They gave away a very handsome desk calendar as a souvenir, and their headquarters were always crowded with delegates. Mr. A. Steinmetz, the assistant secretary, was in charge of the exhibit, assisted by Mr. T. F. McClaren, sales manager and a staff composed of Mr. O. O. Stone, Mr. Hiram Norcross and Mr. J. L. Bowdich. This concern has only been in operation since last October but they have made phenomenal strides and they are receiving many complimentary letters regarding the quality of their cement. They are running their plant to its full capacity.

The Induroroid roofing, made by H. F. Watson Co., Erie, Pa., was one of the exhibits on the second floor. This is a very superior roofing and consists of a thick, uniform, closely formed sheet of pure wool felt, thoroughly saturated with a mixture of asphalt and mineral rubber, which in themselves render the sheet impervious to moisture. The fabric is then treated or coated on both sides with the induroroid composition which acts on the under side as a protection from condensation, acids, gases and other vapors, and on the upper or exposed side as a thorough coat or shield against the ravages of time and the elements. Mr. J. F. Hicks was in charge of the exhibit.

Mr. J. S. Browne, president of the Ruggles Granite Co., whose general offices are at Chickasha, I. T., and whose quarries are at Granite, Okla., was in attendance. Mr. Browne pays Rock Products a very high compliment by saying that they put him into business. He said he had been reading the paper for some time and had secured much valuable information from it. He has only recently opened up his quarry and the first big job for which they will furnish their granite will be the Enid, Oklahoma, Court House. Their granite is suitable for both monumental and building stone and they also made crushed granite for paving blocks. Mr. Browne is also the president of the Union Supply Co., at Mountain Dew, Okla., and vice president of the Stephenson-Browne Lumber Co., of Chickasha, Okla.

A Jollification.

The annual meeting and banquet of the Pennsylvania Lime Manufacturers to the Retail Dealers' Association, of Philadelphia, was a grand success. It was held at Bellevue Stratford, January 30, and the menu was as follows:

MENU

Tid Bits
Cotuit Oysters
Celery
Cream Argentine
Hors-D'Oeuvre
Turban de Bass
Potatoes Hollandaise
Filet Mignon a la Cheron
Sweet Potatoes Louisiana
SORBET
Virginia Quail with Cress
Tomato Andalouse
Plombiere Dumas
Croquants
Camembert and Roquefort
Toasted Crackers
Coffee
Martinis Sauernes Champagne
Cigarettes Cigars

The addresses were as follows:

Greeting—Mr. William B. Irvine, President, Manufacturers' Association.

Response—Mr. Charles C. Cox, Chairman, Retail Association.

The "Square Deal" as applied to the Lime Business—Mr. George Sinn.

"The Ladies"—Mr. William B. Rambo.

Good Fellowship in Business—Mr. Walter Bowditch.

Association Results—Mr. Charles Warner, Ex-President, National Lime Association.

Mr. Fred A. Daboll was toastmaster of the occasion.

The results of the splendid work of this association have been marvelous. The friendliness among the manufacturers, their regard for each other and the exchange of friendly courtesies between dealer and manufacturer have created a condition not prevailing in any other section, and by the way, this is the outcome of the efforts of the National Lime Manufacturers' Association through its president, Charles Warner.

Grand Rapids Prosperous.

GRAND RAPIDS, MICH., February 10.—S. A. Moorhead & Co. say: "We are pleased to report that Grand Rapids and western Michigan are keeping up with the rest of our great country. Although there has been no apparent boom, yet there has been a large amount of building during the last three years. Factories have been enlarged, some new ones constructed, and business buildings erected. These years have been the greatest era for house building in the history of the city."

"The consensus of opinion is that the coming year will be equally as good as the past. Construction along the lines of reinforced concrete for floors is coming in favor, while concrete is taking the place of ordinary building stone in most cases for foundations, while here and there a building is being erected of concrete blocks entirely. The Evening Press building is a fine structure of Indiana stone, and the Kahn system of reinforced concrete, costing over one hundred thousand dollars, is a credit to a city of any size. The hospital at the soldiers' home and the new furniture exhibition building are among the larger buildings in course of construction."

The building material men all show signs of prosperity, and seem to be contented with the conditions and outlook. Their greatest grievance is the inclination of the manufacturer or the outside jobber to come in and sell direct to the consumer, but we suppose this situation is one that has to be contended with in most cities to a greater or less extent. The local dealers realize that one man can not do all the business, and believe in the theory or motto of "live and let live."

We compliment you on the character of your publication and wish you continued success."

Plaster.**The Southern Gypsum Co.**

The Southern Gypsum Co. is the title of a new company being formed in Greensboro, N. C. The prospectus states that Mr. W. E. Cochran, who is heading the movement, has had a Government analysis made of the deposits underlying about eight hundred acres of land in Washington and Smyth counties in Southwest Virginia, and has secured fee simple options on the property. Gypsum has been mined on this property for many years, and is of a very pure order, as shown by several Government tests, ranking in purity with the gypsum found in Nova Scotia. The ground is level and admirably adapted for the erection of the buildings and the handling of the material. There is plenty of water at all seasons, and a high-grade coal can be shipped from the Pocahontas district of West Virginia at a very low cost. At different times in the last ten years, this property has been fully tested, with the result that gypsum is found to underlie a considerable area, and is to be found about eight feet from the surface, and to have an average thickness of forty feet.

Fort Dodge Items.

FORT DODGE, IA., February 18.—Messrs. J. T. Cheney, C. F. Duncombe and J. F. McNamara, of Fort Dodge, Ia., have purchased a tract of 160 acres of land underlaid with gypsum rock, and are now organizing a stock company with a paid-up capital of \$250,000.00, for the purpose of erecting a new mill the coming summer. The new plant will be a three-kettle mill of 250 tons capacity. It will be equipped with the latest style machinery, and in all probability will be in operation the latter part of the season. This will make ten stucco mills at Fort Dodge.

Mr. Henry Walter, who for the past six years has served in the capacity of manager and assistant manager of the United States Gypsum Company in their Western offices in Fort Dodge, has resigned his position with the company to engage in other business. His resignation takes effect February 1st. His successor has not as yet been appointed.

Manager H. H. Pierce, of the United States Gypsum Company offices in Fort Dodge, reports the outlook for business this season very bright. The mills of the company at this place are being overhauled with the expectation of a heavy season's business. The mills of the company at Blue Ridge, Kan., are being enlarged. The company expects the coming season to be a banner year in a business sense.

Youngest and Oldest.

TOLEDO, OHIO, February 16.—The Fishback Plaster Co. have offices in the Builders' Exchange in Toledo. They have plaster factories at Toledo, O.; Ft. Wayne, Ind., and gypsum mines at Port Clinton, O. Mr. L. G. Powell is the secretary-treasurer of the company. He is at once the youngest and oldest man in the business—youngest in point of years and oldest in point of service, he having begun in a clerical capacity with the first plaster mill built in the State of Ohio.

He said that business had been away above all expectations; in fact, his firm has had great trouble in filling their orders on time.

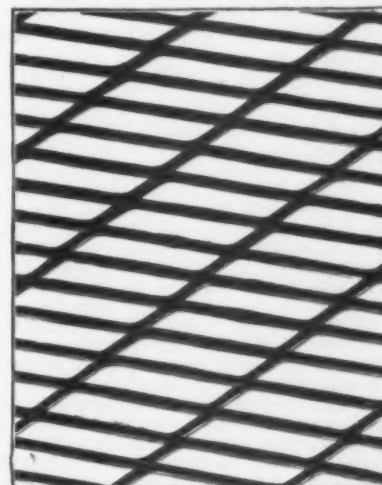
Contemplated Improvements.

The American Gypsum Co., of Port Clinton, O., are going to build a steel-frame calcining mill, and are in the market for rock crushers, dryers, elevating and conveying machinery, pulverizers, and the usual equipment for a gypsum mill. They would also like to know something about gas producers and gas engines, as they are thinking of producing power in this way and generating electric current for the entire plant and mine. They are also in the market for hoisting and mining equipment.

Expanded Metal Lath.

There is no architect or builder who has not been confronted with the question of defects in plastered surfaces, more especially where lath have been used as a foundation for such work. Cracks and other imperfections show even where the best of materials have been used in the mortar compound. There are few architects who do not understand the fact that this is due to the tensile weakness of the mortar or plaster used for such work. Like cement of any kind, it becomes sufficiently hard to be all that could be desired in compressive strength, but lacking tenacity (the most essential feature required to make perfect work), some provision is necessary to reinforce the mass into proper cohesion.

In the various methods that have been employed too much dependence has been placed on the adhesive properties of the materials, clinch, etc., to obtain satisfactory results. It is not enough to provide for the perfect adhesion and retention of the material which is to be applied. If we would obtain anything like perfection in plastered work. The more important elements of cohesive force must be recognized and a sufficient tensile strength secured by reinforcing the mass into a solid slab. To accomplish this the strand must be so shaped as to retain the mortar sufficiently to completely fill the mesh and obtain a body on the back of the lath quite equal to the face of the work, so that the reinforcing metal is thoroughly imbedded in the mortar.



KNO-BURN STEEL LATH REDUCED TO HALF SIZE.

This can not be done by the use of wire, because the weight of the mortar exceeds its tensile strength; and accordingly the fill or clinch is sheared off by the wire and drops away from it, leaving a face slab only, which is insufficient to resist the tensile stresses. In fact, any method which fails to recognize the importance of cohesive force throughout the entire mass composing the walls and ceilings is little, if any, improvement on wood lath, where all depends on the adhesive and tensile strength of the mortar.

Perforated metal can not reinforce the mass, because the solid back prevents the inner coating necessary to imbed the metal and to equalize the compressive and tensile stresses.

The meshes in expanded metal lath are made by shearing the metal at right angles with the plate, thus producing a flat strand, which will retain the mortar and completely fill the mesh and so thoroughly imbed the metal that it is not only protected from the impingement of flame, but the mass is reinforced into a solid slab that defies the changes of temperature. Moreover, the slab thus formed is one solid piece and could be removed from its position like a slab of stone or marble.

The function of Kno-Burn Steel Lath, as illustrated above, is not merely to provide a surface upon which mortar can be temporarily spread, but to reinforce the walls into permanent, fireproof, indestructible and lasting structures.

The Oklahoma Plaster Co., to be located at Alva, Woods county, O. T., has been incorporated, with a capital stock of \$150,000. The directors are Messrs. C. M. Poorman, C. A. Poorman, of Anthony, and James A. Bickel, of Quinlan. The quarry is located east of the city of Alva, and a mill will be built having a capacity of 400 tons per day to begin with.

Brick

Sand-Lime, Cement.

Plausible Reasons for Joining the Association.

Through a lack of clearly understanding the attitudes of the National Association of Manufacturers of Sand-Lime Products, a number of manufacturers of sand-lime bricks have complained because the papers and discussions presented at the recent meeting of the association, held at Detroit, have not been made public.

When the fact is taken into consideration that much time and money have been spent in securing such data, together with obtaining professional services for making experiments, it can be readily understood that it would not be doing justice to the members of the association to give it out for publication. The proceedings have been published in book form and will be sent to any member of the association who may desire the same.

In reference to the subject Secretary H. O. Duerr, of the Sand-Lime Products Association, writes:

"The initiation fee is \$5.00, the annual dues \$5.00, and for the year 1906 there is an additional assessment of \$30.00, making the total expense of becoming a member \$40.00. This is an exceedingly small cost for the amount of information furnished. Several members have already told me that the information they obtained at the meeting showed them where they had been making some serious mistakes and would be a saving to them of at least several thousand dollars. This is the case, no doubt, with a great many members. It would be ridiculous to assume that there are any of us who can not learn something new that is of value in the manufacture of sand-lime brick. If we can be working together and help each other out at a small annual cost of \$30.00 or \$40.00, it certainly is a mistake for us to try to work out our own problems independently at a much greater cost.

"Many manufacturers of sand-lime brick who have visited me have stated that, if they had had some one to give them the information that they now possess, when they started, they would have been able to save a good deal of money; and instead of merely paying expenses they would have been in a position to pay dividends."

The Official Chemist.

We have been informed by Secretary H. O. Duerr that the Sand-Lime Products Association has appointed Dr. E. W. Lazell, of the Henry S. Spackman Engineering Co., of Philadelphia, Pa., official chemist of the association. Those who desire to have tests and laboratory work done, both scientifically and reasonably, can do so by addressing Dr. Lazell. This announcement will, doubtless, be received with pleasure by every one, as the undoubted ability of the above-named gentleman is a guarantee of the most satisfactory results.

A Superior Cement Brick Machine.

Among the popular machines now on the market for the manufacture of cement bricks is that of the Spears Brick Machine Co., of Louisville, Ky. Since placing this machine on the market, it has given every satisfaction and met all requirements, proving its value as a medium for those desiring a reasonable and profitable investment.

The motion of the machine is continuous, and can be adapted to either hand or motor power. The pressure is adjustable.

The first concrete bricks to meet the requirements of the New York building department were made on this machine, and the Spears Brick Co. were the first to have on sale a concrete brick in that city. These bricks showed a crushing strain as high as 180,000 pounds to the brick, including freezing and absorption tests.

The bricks are pressed on the ends and thus the face is always shown; and the pressure is al-



BUILT OF CEMENT BRICKS MADE ON SPEAR'S BRICK MACHINE.

ways greater on the face than on the back of the brick, thus shutting out or minimizing the absorption in the face, while allowing for greater porosity in backing to take up the humidity in the air. In manufacturing brick, either pressing or tamping can be done.

The machine is of few parts, simple and strong, and can be operated by the crudest labor. As high as 1,130 brick per hour have been made with inexperienced workmen.

Brick made 6 to 1, twenty-four hours old, have been laid in the wall. The company has testimonials that brick made are true faced and straight edge, and that from 300 to 500 more brick per day can be laid than clay brick, and that they cut and split readily, and the mortar works longer than on any other kind of brick.

In the illustrations herewith shown the three-story brick warehouse is built of 350,000 brick, and the two-story dwelling is composed of 45,000 brick made on this machine. The bricks that were used in the construction of these houses were made on the ground where they stand.

Organize Cement Brick Company.

DES MOINES, IA., February 8.—The Iowa Enamel Stone Co. has been incorporated with a capital stock of \$40,000.00. The company controls patents for the manufacture of cement brick and blocks. Arrangements have been made to erect a large, well equipped plant, with a large daily capacity. Those interested are Orion Ruffcom, Frank H. Stehm, M. L. Dudley, Walter McCain, John Kilmar, A. Watson, Judge Parrish, C. C. Pugh, all of this city, and E. R. Smith, of Toledo, J. G. Berryhill and others.

The Sinnott-Furry Company Enlarging.

NASHVILLE, TENN., February 19.—The Sinnott-Furry Cement Brick Co. are contractors and builders, with offices in the First National Bank building. They build cement brick buildings and contract for concrete work of every description. They use the Davies Cement Brick machine, and also the Queen City. Mr. Sinnott says that he does not believe that a cement brick can be properly made without hydraulic pressure. The Davies machine is a hydraulic pressure machine. He says that by making a brick under hydraulic pressure that they can use a much larger percentage of sand, gravel, or crushed stone, or whatever product they may choose to use, and a correspondingly less amount of cement; in other words, a brick made one to seven with hydraulic pressure will be equal to a brick made one to four, without the pressure. In addition, he says that a brick made under pressure can be used two or three



AMERICAN TOOL CO.'S PLANT ERECTED OF SPEAR'S CEMENT BRICK.

days after it is made, as there are less voids and the absorption is not so great. He also claims that a brick made this way is impervious to moisture. They have built seven houses in Memphis by this process, and they have all given complete satisfaction. They also built the Russellville, Ky., court house, and other buildings in different cities. Mr. Sinnott was one of the first men to do any concrete work in Nashville. They will soon open branch houses at Birmingham, Ala., and Meridian, Miss. They have shipped brick machines to both of these points, and they will soon commence operations. Mr. Sinnott is also president of the H. T. Sinnott Co., who are engineers and contractors for steel bridges and structural work.

Increasing Popularity in Germany.

As an evidence of the progress of the sand-lime brick industry in Germany, Consul-General Guenther, of Berlin, has written regarding conditions there. It is now generally known that Germany was the original country where these now popular bricks were first manufactured.

He says: "The Berlin paper, Mittag, says that bricks of sand and lime, which were first made in 1880, but have only been used on a large scale for the last eight years, are becoming a dangerous rival to the old style of clay bricks. These new bricks consist solely of sand and lime without any other binding material or ingredient, and they cost much less than clay bricks. Furthermore sand is found almost everywhere, and factories can be placed at points where transportation is favorable, while the clay used for clay bricks is often found in locations whence transportation is very expensive. The assertion that the quality is superior to clay bricks remains to be proved.

"The industry is too young for a final opinion as to how long or well these new bricks will last. They possess a very great resistance to pressure and can in many instances be substituted for clinkers. The edges, if the proper pressure is employed in their manufacture, are sharp and even; they do not warp, and the walls erected from them present an even and uniform appearance. The addition to the criminal court house at Berlin-Moabit, the Queen Louise Church at Konigsberg, a large part of the new Berlin city hall, numerous buildings of the war department at Berlin, and many structures in the Prussian provinces, were built of these lime-sand bricks. Time alone will tell whether they are as durable and weatherproof as the old style of clay bricks."

A Profitable Investment for Brick Men.

The Helm Cement Brick Press is a machine manufactured by the Queen City Brick Machinery Co., of Traverse City, Mich., which has been constructed along scientific lines, comprising simplicity and durability, and which has fulfilled every claim made by the above company.

The machine is designed for the manufacture of all styles of cement brick, competing with the first on the market, and requiring comparatively little labor, while producing the most satisfactory results.

Tests have been made of cement brick made of 5 to 1, thirty days old, on the Helm machine, which stood 41,800 pounds compression, 1,323 pounds per square inch. The daily capacity of this machine is 10,000 brick, making ten brick at a single operation.

Any color brick can be made, and the simple construction of the machine makes it an admirable and economical investment for those contemplating the manufacture of cement brick.

New Sand-Lime Company Being Organized.

VANCOUVER, B. C., January 12.—A company is being organized here for the manufacture of sand-lime brick, under the Steger process. The capital stock of the new company will be \$100,000.00. A plant will be erected with a daily capacity of 40,000 brick. This plant will cost \$40,000.00. Col. W. B. Dickey is promoting the industry, and it is said the plans will be perfected within a short time.

Erecting Modern Plant.

DOVER, DEL., February 20.—The National Concrete Co. has just been organized at Horton, Morris County, Del., to manufacture cement brick and blocks. A plant is now under way and as they have a large number of orders on hand, they will be compelled to operate day and night. The latest improvements will be installed.

Roofing.

The National Association of Master Composition Roofers of U. S. A.

Emil Machwirth, Buffalo, N. Y. President
P. LeGouillon, Pittsburg, Pa. First Vice-President
H. C. Smither, Indianapolis, Ind. Second Vice-President
W. K. Thomas, Chicago, Ill. Secretary and Treasurer

DIRECTORS.

E. S. Bortel, Philadelphia, Pa.
C. A. Monks, Louisville, Ky.
T. S. Harkness, Cincinnati, Ohio.

Official Organ, ROCK PRODUCTS.

More Publicity is Essential.

One of the subjects that should interest every reader, every citizen, is that of roofing. Like so many others it is old, yet ever new, from the fact that it has alike progressed with other industries in the building line. To many this is a small industry; small, because it has gone in a quiet way progressing notably, but in such a way as to excite little general comment.

Nevertheless few industries have made greater progress, nor are of more importance to the general public. Roofs are just as essential to a structure as are the foundation and walls, and greater attention should be given to this subject.

The roofing materials have increased in number as the demand made them necessary, and yet these are yet comparatively small in variety. Felt, gravel and tar, composition, cement, tile and slate, are probably the most extensively used, and give the best service, although several of these have precedence on account of their superiority. Waste products are now generally used, and much that would otherwise be discarded as entirely valueless for any purpose except the dump pile, is manufactured into roofing that makes the most durable material. What the roofing industry needs is more publicity; a greater knowledge of its importance and value to the community. The roofing manufacturers should put the public into closer connection with their industry and thus improve its general conditions.

A Roofer's Plea for Co-Operation.

There is much truth in the article which appeared in the January 22, issue of Rock Products. Let me say right here that I have long taken the same view of the situation. We have not shown enough interest in our association. We have permitted it to run along in a haphazard kind of way, believing that the other fellow would boom it for us.

There is where the mistake lies; we need a keener interest; we need active workers and those who feel that in helping others they will help themselves. I say with regret that our roofing association is far from what it should be, and its present state is due simply to lethargy. How can any man, organization or association succeed unless there is a determination to push forward, to work with unflagging earnestness?

Further than this in my humble opinion, it seems to me that we roofers are, as the article intimates, a little too selfish. We are too much for I or we, and make too many sacrifices of the wrong kind. Such sacrifices will more often than otherwise benefit ourselves regardless of any one else. True, we are not in business for neighbors' profit, nor are we spending our time that he may prosper, but too often we lose sight of all considerations of or for him, and by our peculiar methods of doing business injure our own good and rob him.

These evils are not peculiar to the roofing industry, but unfortunately it has its share. The object

of forming an association was to overcome these and to strengthen the industry generally. I want to see each member present at our next meeting and I want furthermore to see each member bring a prospective member with him. How can we accomplish our mission without greater effort? It's up to us, boys to make the organization, and then the industry one to be proud of, one that we can feel that is doing something in reality.

A Cement Roofing Tile Machine.

One of the most durable and at the same time simple cement roofing machines ever constructed, has been patented by the American Cement Roofing Co., of Hamber, Ohio. This machine is known as the "New Era," and was awarded the first grand prize at the St. Louis Exposition. The operation is so simple that any ordinary workman can make an average of two squares in ten hours. One barrel of cement will be sufficient to manufacture two and one-fourth squares, while the weight of the tiles are from 650 to 750 pounds per 100 square ft. One hundred of these slates will cover an equal amount of roofing. There is an attachment on this machine which will enable the operator to make an eight inch shingle.

The machine can be operated with cement and sand or cement and crushed stone, the latter ingredient making a very durable slate. The general selling price is \$6.00 per square on the roof, and they can be put on as low as 75 cents, though the average price is higher. These tiles are not only more durable, but are cheaper than shingles and in every way preferable, as they can be manufactured in various colors. These slates are secured by wire, thus doing away with nailing or cementing.

Complete Another Large Plant.

The Philip Carey Manufacturing Co., Lockland, Ohio, have recently completed another new factory—one of the largest in the country—which will be used in addition to their other factories, for the manufacture of the Carey roofing. The present plant of the Carey Co. covers twenty acres; while the ground plan is 32½ acres. The large increase of the business of this company through the sale of Carey's roofing has made it necessary to increase the factory space from year to year.

The Carey Co. was established thirty-three years ago, and they have had the Carey roofing on the market for the past twenty years, where it has given highly satisfactory results and proven one of the most thoroughly reliable roofing materials so far produced. Carey's roofing is not only being used by the leading railroads, builders and architects throughout the country, but the trade for this roofing has increased enormously among the farmers of the country; large amounts being used for covering barns, dwellings, warehouses, poultry buildings, and in fact, all class of buildings wherever a good, durable and economical roof is required.

In addition to the manufacture of roofing, this company also manufacture sulphuric acid and magnesium steam pipe and boiler coverings, asbestos paper, wicking, packing, and in fact, all materials in the asbestos line; having branch factories for the manufacture of these goods located at Baldwinville, Mass., and Plymouth Meeting, Pa.

Have Formed Big Organization.

The Ludowici Roofing Tile Co. and the Celadon Roofing Tile Co., have merged their interests. The new organizations will be known as the Ludowici-Celadon Co. This consolidation brings into one company the two largest roofing tile manufacturers in the country—leaders in their product and for many years fierce rivals. It makes a formidable aggregation of assets, plants and salesmen, with facilities for the production of clay roofing tiles and equal facilities for marketing its ware.

The maintenance of four large factories—at Chicago Heights, Ill., New Lexington, Ohio; Ludowici, Ga., and Alfred, N. Y., will prove of vast importance in the rapid distribution of material, and at the same time enable the Ludowici-Celadon Co. to meet architects and engineers' specifications with any quality of roofing tiles, of any shape, in any color, at any time.

The Improved Elastic Slate Roofing Co., of Boston, Mass., has been organized with a capital stock of \$25,000.00. The officers are: J. Mandell, president; Ida D. Lewis, treasurer; A. Mandell, clerk, 37 Sharpe Street.

Roofing Business Good.

MEMPHIS, TENN., February 17.—The Bartholomew Roofing Co. are located at 648 Second Street, this city. They handle all kinds of composition roofing, roof paints, building and sheathing papers, deadening felts, and asbestos goods. Mr. Bartholomew said that they had been very busy during the past season, in fact, they had had all the business they could comfortably handle, and the prospects for a continuation of same were very fair.

Open Winter Makes business.

NASHVILLE, TENN., February 19.—Mr. R. L. Proctor is the general manager of the Nashville Roofing and Paving Co., with offices in the First National Bank building. He said that his firm was very busy and have some large contracts on hand at the present time. On account of the very open winter, there have been but few weeks when they could not go on with their work, and, as a result, they have had a practically uninterrupted season.

Conditions Are Most Encouraging.

INDIANAPOLIS, IND., January 31.—Henry C. Smither, one of the large roofing operators who is deeply interested in the association work, writes: "The past year has been one of the most successful business years I have ever had. I have done more work and have had better results than ever before, and the outlook for the coming year seems good so far."

Making Additions to Plant.

COFFEYVILLE, KAN., February 15.—The Western Roofing Tile Co. write us regarding their business, saying: "We are pleased to advise you that the year just passed was an exceptionally good one and the demand for roofing tile throughout the West and Southwest is steadily increasing. We manufacture several desirable patterns of interlocking roofing tile, using the celebrated Coffeyville shale in the manufacture and we burn the material with natural gas. We have recently installed an additional press and will further increase our capacity by adding more kilns."

May Consolidate Interests.

URBANA, ILL., February 19.—Arrangements are being made to consolidate the interests of Otis Hinds, of this city, and E. E. Groves, of Mattoon. These gentlemen are engaged in the roofing business, and feel that by consolidating would greatly assist their future business. Mr. Hinds is a well known gravel and slate roofing man and Mr. Groves is engaged in the steel ceiling, galvanized cornice business. The prospects for this new organization are bright.

Adding a New Feature.

GRAND RAPIDS, MICH., February 10.—The Aztec Roofing Co., of this city, will widen its field of action by the manufacture of cement tile roofing. The company has just purchased a machine for this purpose and will begin operations within a very short time.

The Wissahickon Manufacturing Co., of Philadelphia, Pa., has been organized with a capital stock of \$100,000.00. The company will deal in roofing, cements, etc.

The Warrick Roofing Tile Co. has been organized at Newburg, Warrick County, Ind., with a capital stock of \$25,000.00. The directors are: Harry A. Wartman, George M. Uhl and Chas W. Cook.

The Hyndman Roofing Co., of Cincinnati, Ohio, has been organized by Robert J. Hyndman, Arthur D. Grant, C. O. Lyon, Edward Ritchie and C. R. Faddock. The capital stock is \$30,000.00.

The Cincinnati Roofing and Terra Cotta Co., of Cincinnati, Ohio, has just purchased a plot of ground 80x230 feet, upon which it will erect a large addition, costing about \$20,000.00. The new plant will adjoin the company's present quarters.

The Improved Elastic Slate Roofing Co., of Boston, Mass., has been organized with a roofing stock of \$25,000.00. The officers are: J. Mandell, president; Ida D. Lewis, treasurer; A. Mandell, clerk, 37 Sharpe Street.

The Susquehanna Roofing Manufacturing Co., of Cly, Pa., is rebuilding its tar roofing plant, which was recently destroyed. The building will be completed within a short time.

Side Talk.

The Mathews Gravity Carrier.

A device which will be of great interest to every manufacturer or user of all kinds of building materials is the Mathews Gravity Carrier, manufactured by the Mathews Gravity Carrier Co., of St. Paul, Minn. The waste of labor, time and money in the handling of cement blocks, all kinds of brick, sewer pipe, tiling and in fact all kinds of manufactured articles which have to be loaded in cars for shipment or transported from machine or kiln to drying sheds, curing sheds, or to store rooms about the plant, is beyond estimation and is perhaps the greatest drawback to the rapid production of these materials. The Mathews Carrier is well calculated to be of infinite service to the manufacturer whose time is money and who is at present employing large forces of men in conveying his product about his plant and to and from railroad cars.

Nearly every kind of a conveyor heretofore known has required the use of expensive power. Either electricity, steam, water or some medium incurring great expense has been installed, but the new invention requires none of these and relies alone on the sure force of gravity for power.

The carriers are made in various sizes and kinds to meet all requirements, but the general principle of the invention can be seen in the picture printed on this page which shows the carrier as adapted to handling short blocks of wood, which illustrate its usefulness in handling all kinds of material having a regular outline and partially smooth surface. By means of a new reclining, portable elevator, materials can be carried either on the level or on up grade one foot in three. Sectional curves and all necessary crooks and turns are made by the Mathews Co.

The Phillips' Continuous Mixer.

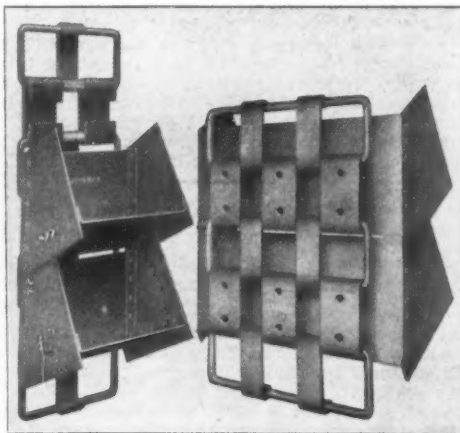
One of the best posted men in the concrete business is Mr. Wm. H. Phillips, manufacturer of the Phillips Continuous Concrete Mixer, of Columbus, Ohio. Mr. Phillips' Mixer is the result of practical experience. He has made constant improvements upon the original mixer which is still in operation in Columbus and doing just as good work as the day it was made. The inventor claims he has a concrete mixer which has advantages that no other mixer on the market has. One of them is a portable inside which can be removed in cleaning the blades, which are eight in number riveted to four malleable iron rings in such a manner as to carry the material through the machine with the right speed to give a thorough mix. Another good feature is that the inner frame can be held rigid while the drum revolves. In this way the drum is thoroughly cleaned and the inner part can be lifted out and swept with very little trouble. The cleaning of the mixer has always been one of the stumbling blocks to a successful machine. The Phillips Continuous Concrete mixer feeds from a large double hopper. One part for sand, crushed stone or gravel, and the other for cement. These hoppers and the bottom are made of steel blades well riveted. Mr. Phillips has only recently secured his patent.

Rock Wool Use Increasing.

The American Insulating Material Manufacturing Co., of St. Louis, Mo., say, "We are running night and day manufacturing rock wool and have been running steadily through the whole year of 1905. The number of cold storage plants, ice making plants, who are the principal consumers of rock wool, is increasing all the time, especially in the South and Southwest.

The "Patnoe" Chain.

The accompanying illustrations show a special chain which is being brought out by the Jeffrey Manufacturing Company, of Columbus, Ohio, to be known as the "Patnoe" Stone Elevator Chain. Its strength and wearing qualities will be evi-



THE PATNOE STONE ELEVATOR CHAIN, SHOWING DOUBLE UNIT BUCKET, MADE BY JEFFREY MFG. CO.

dent at a glance. Briefly describing this new, simple yet powerful chain; it is made of wrought steel, carefully welded, while every link is brought to a perfect pitch. The carrying links, as will be noted, are of a substantial design and of a strength to make them practically unbreakable.

This type of chain is made up in single, double and triple units, the double and triple units being shown in the illustrations.

Its strength and large wearing surface (which in the double unit is 12 inches and in the triple 18 inches) make it a chain which in the handling of broken stone, will, with ordinary care, last for a period anywhere between two and five years. Its carrying capacity is simply enormous. The double unit chain with 12 inches wearing surface carries a bucket anywhere from 18 to 24 inches in length, while the triple unit will carry a bucket 26 and 36 inches in length.

In the illustration the double unit bucket, which is 25 inches in length and 10 inches projection, gives a capacity of 150 tons of broken stone per hour; the triple unit, which has a bucket 36 inches in length and 14 inches projection gives a capacity of 300 tons of broken stone hourly.

With ordinary care this type of elevator can be run almost continuously without perceptible wear. It operates over special adjustable sprocket wheels at the head. It is recommended especially to those who appreciate the value of machinery capable of constant work and heavy service under any emergency. It is made in various sizes to suit the conditions and the manufactures

New Invention.

The accompanying cut illustrates the Williams Patent Hinged Hammer Universal Grinder, which is particularly adapted to grinding limestone, lime, gypsum rock, shale, clay, coal, or hydraulic cement, to 20, 30, 40 mesh and finer. The hinged hammer principle as invented by Milton F. Williams, president of this company, some ten years ago, we believe is too well known to require a

detail explanation of the principle. There are now 1,000 Williams' machines in operation on various materials, about 300 of which are working upon the above mentioned materials. The "New Williams" Universal, as illustrated above, is an improved machine over those furnished by the Williams Company some five or six years ago, the "New Williams" is used in a number of Portland cement plants throughout the United States for preparing the raw material, namely limestone, and shale, or limestone and clay, to 20 mesh, preparatory to the tube mill. In the plant of the German-American Portland Cement Works, La Salle, Ill., there have been in operation four Williams' "New Universal" machines for three years, and the results from each machine are as follows: 700 barrels per 22 hours of raw material, (660 pounds to the barrel) being ground from 2½ inch size to tube mill feed, with 35 horse power for each machine, and with a cost for maintenance of approximately two tenths cent per ton material ground. This same New Universal machine is used quite extensively for grinding gypsum rock in various plants, reducing this material to 30 to 40 mesh preparatory to calcining, and two No. 3 Williams Universals have been in operation for two years in the plant of the Plymouth Gypsum Plaster Co., Fort Dodge, Iowa, the results shown are as follows: 12 tons per hour, each machine with 35 horse power, taking 1 inch dry gypsum rock, and reducing to 30 and 40 mesh, the cost for maintenance has been so small on these machines that we understand these people have run for two years and never spent \$1.00 for renewals. This same New Universal machine is extensively used in Portland cement plants for preparing dry coal for the tube mill, taking coal that is 1 inch and finer and reducing same 95 per cent. through 20 mesh, capacity 8 to 10 tons per hour, with 35 horse power, the same machine is extensively used for grinding lime, with about the same results as on gypsum rock, the Williams people also advise that they have sold a number of their hammer grinders of another type, which is not quite as expensive as the Universal machine shown above, for reducing limestone to topsoil sand, also for the concrete building block trade, having had a number of these machines in operation for several years with the very best of results.

Single Stave Barrel.

A single stave barrel is being put on the market by the Single Stave Barrel Co., of Cleveland, Ohio. This barrel is not an experiment by any means as they have been in actual use by several concerns for sometime. They have stood every test to which they have been subjected. It is claimed by the manufacturer that this is positively the strongest barrel on the market and is especially adapted for the use of the manufacturer of lime, cement and plaster. They combine durability and strength with extreme lightness. As a test the manufacturers of this barrel have shipped heavy casting, emery wheels, nuts, etc., long distances just to test the strength and durability of the package. The Single Stave Barrel Co., anticipate very heavy sales on these barrels when their virtues are once appreciated by the trade.



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BY EXPERIENCED MAN with a builders' supply or wall plaster concern, where all efficiency will make possible partnership; good reference. Address G-Z 5, care Rock Products.

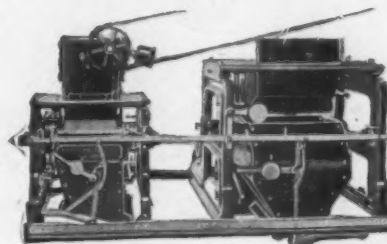
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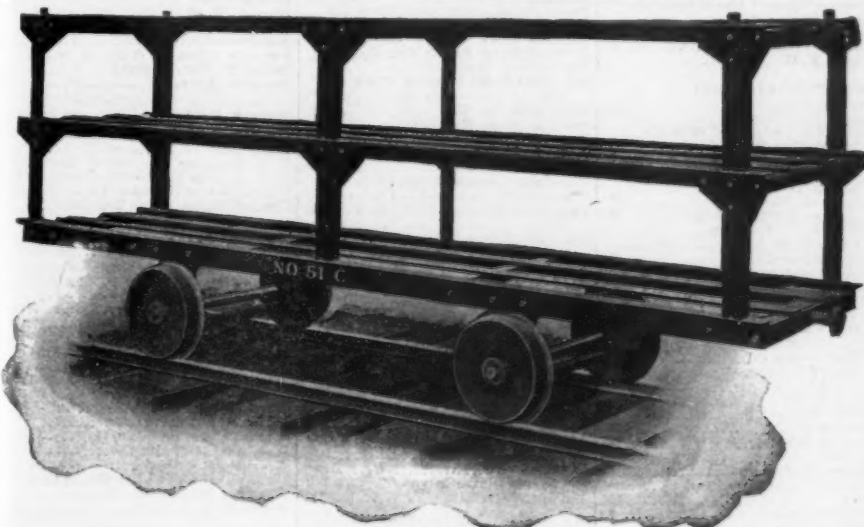
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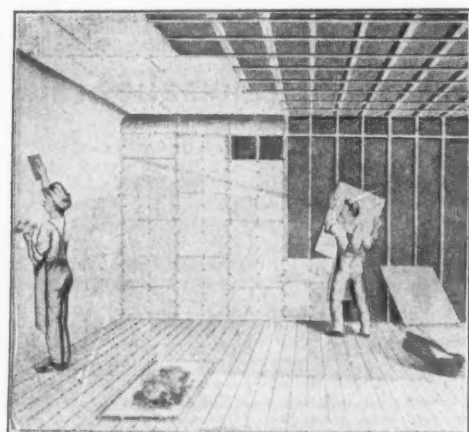
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Bates Engineering Co.

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EXCELSIOR.

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Elyria Mac. Works, The

Ohio Fibre Mch. Co., The

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Mundie, Alexander

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LIME.

HAVE

YOU ever tried the
Wanted and For Sale
Dept. for Results?

BRICK CLAMPS MAKE MONEY.



THE ONLY TOOL TO HANDLE BRICK.

SAVES MONEY.
SAVES BRICK.
SAVES TIME.
SAVES HANDS.

Why handle brick in the same manner as the Ancients?

Buy a pair of Brick Clamps and be up-to-date. Unload one car of brick and you save the cost of this appliance.

50c to \$1.00 per thousand on Pressed Brick alone, saved by no chips.

Street contractors, save your pavers 33 per cent. labor by carrying brick from curb instead of dumping from a wheelbarrow. PRICE \$2.50 EACH.

Houston Brothers Company

32d Street and Penna. R. R. PITTSBURG, PA.

**Peirce
City
White
Lime**



STRENGTH PURITY
**Ste. Genevieve Brand
WHITE LIME**

Will work smoother, go farther and combine with cement better than any other known brand

CLIFFDALE LIME CO.
STE. GENEVIEVE, MO.

**NATIONAL WALL PLASTER Co.,
OF AMERICA**

MANUFACTURERS OF

Gypsum and Calcined Plaster.

539 Onondaga County Savings Bank Building,

SYRACUSE, N. Y.

Cement Brick Machines

From \$25.00 and up
Capacity 1,200 to 48,000 per day.

Building Block Machines

From \$50.00 and up
Capacity 150 to 600 per day.

Concrete Mixers

From \$75.00 and up
Capacity 1 1-2 to 15 yds. per hour.
Power Tampers.

MOLDS

for Cap and Sill, Columns, Base Ball Baluster and Spindle, Sewer and Conduit Pipe, Sidewalk Tile, Roofing Tile, Fence Posts.

A. D. MacKAY & CO

84 Washington Street,

CHICAGO, ILL.



POWER AND MINING MACHINERY COMPANY

Designers and Builders of Machinery

For Crushing and Handling Rock, including Railway Ballast Plants, Stone Screens, Elevators and Transmission Machinery. American-Crossley Gas Engines, American-Crossley Suction Gas Plants, Loomis-Pettibone Gas Generators for power.

**The No. 9 McCully Gyratory
Rock Crusher**

THE LARGEST AND MOST POWERFUL IN THE WORLD.

Will break more rock per Horse Power, and crush it finer than any crusher ever built.

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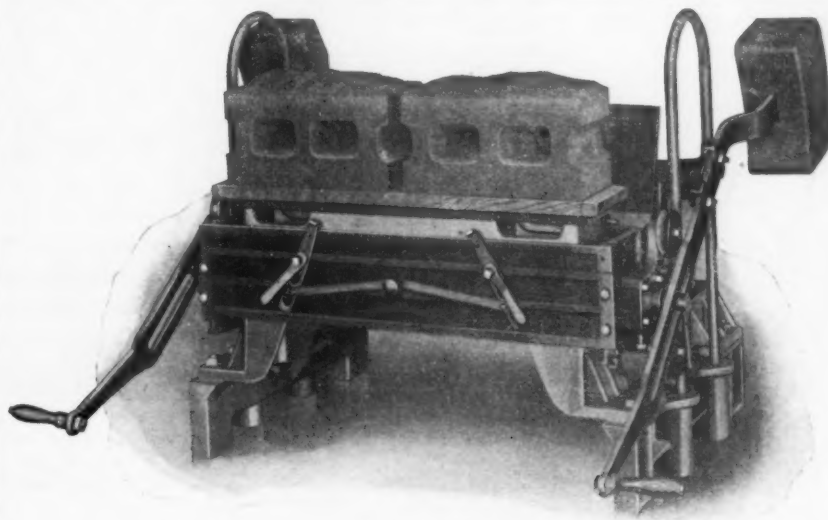
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Tell 'em you saw it in ROCK PRODUCTS.

ATLAS CEMENT STONE MACHINE

Makes Stones 4 to 16 inches Wide and up to 36 inches Long.



Rear View of Atlas Cement Stone Machine—Showing Method of Delivering Stone.

Experience has demonstrated that a Tamp on the face machine produces the only perfect stone, acceptable alike to mechanic and builder. Here are seven great arguments to back the assertion:

- 1st. It makes a stone that is most impervious to moisture.
- 2nd. Since the face of the stone is made denser, it will not crumble but wear like granite.
- 3rd. It looks like natural stone because of the lighter color.
- 4th. In rock face stone, it makes sharper angles preventing the artificial appearance.
- 5th. It offers the cheapest proposition for coloring stone as the coloring matter is only required in the facing mixture.
- 6th. It offers a saving in cement and yet secures a better stone.
- 7th. It offers the great advantage of allowing the coarser mixture to be introduced much wetter than the facing mixture and thus secures perfect crystallization.

These seven points being made secure in our machine, every difficulty known to the industry is eliminated.

GUARANTEE We guarantee that a stone made on the ATLAS machine will stand a greater crushing strength than one made on any side plate type machine in existence. This is because a mixture wet enough to secure perfect crystallization can be used on our machine.

For Latest Developments in Concrete Machinery, write at once to

Atlas Cement Machinery Co., 617 Chamber of Commerce Building, ROCHESTER, NEW YORK



Central Christian Church, Cor. 7th and Armstrong Ave., Kansas City, Kansas.

The MILAM Concrete Wall Building Device

The Milam device adopts the wet process and by so doing gets the full benefit of the strength of the cement and may be used with sand or any kind of gravel, crushed rock or cinders—makes hollow or solid walls from 9 to 20 inches wide with smooth, panel or stone pitched faces.

—

This device is adapted to the use of reinforcing steel.
Easily operated—no experts required. No breakage or wastage.

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BOOKLET MAILED ON REQUEST

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Milam and James,

1017-19 North Front St.,
KANSAS CITY, KANSAS.



Residence of Ed. N. Dunning,
6th and Everett St., Kansas City, Kansas.

"The Wonder of the Age"

The Keystone is a face down machine and has proven itself to have a larger capacity and produces neater work than any other machine on the market. A postal will bring you full particulars and valuable information. Address

The Keystone Cement Block Machine Co.

PHOENIXVILLE, PA.



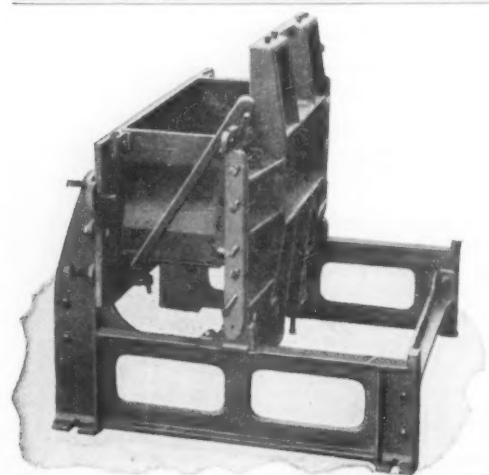
A Perfect Hollow Wall

Is what you want, to make a dry wall, and a frostproof wall. With our machine you can make the blocks to build that kind of wall at the rate of one a minute. We make moulds for all kinds of Caps, Sills, Watertable, also Hand Mixers.

Send for prices to

THE EDMONDSON MACHINE COMPANY, South Bend, Ind.

Tell 'em you saw it in ROCK PRODUCTS.



GET THE BEST

Our 1906 model FACE DOWN MACHINE makes blocks hollow or solid, all lengths and widths. Makes circle, octagon, hexagon, veneered, crown molding, and many fancy blocks, also water tables, Send for Catalogue No. 5.

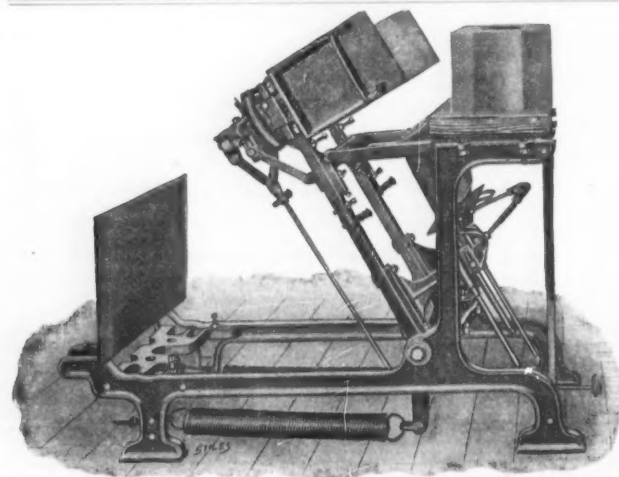
The BOOS AUTOMATIC BRICK MACHINE will make standard brick, plain or rock face, designed especially for facing the brick. Compare its merits with its competitors, the rapidity of its work, quality and uniform size. One man can turn out brick faster on this machine than two men can mix the material and put on the table for him.

ADDRESS

Coltrin Manufacturing Co.,

140 W. Main Street,

JACKSON, MICH.



Automatic Building Block Machines

The wonderful development in the manipulation of cement is largely due to the degree of perfection attained by Block Machines.

The inventive mind is continually devising improvements, but nothing yet has been produced to equal our Automatic Block Machines.

The simplicity and reliability of mechanism makes it practical and speedy and blocks can be cheaply moulded into the most elaborate designs conceived by the most fastidious.

Recognizing the demand for a more dense and perfect face, our machine was especially designed to produce same, and is made to mould the Block Face-Down. You are thus assured of the very best results in quality and appearance of your blocks.

Our catalogue "M" will be of material interest to you, and we would be pleased to send same on request. Write to-day.

Automatic Building Block Machine Company,

130 Liberty Street,

JACKSON, MICH.

The Samson Steel Cement Pressed Brick Machine built for Business



Superior over all others by reason of the adjustable features. A **High Grade Machine** producing a **high grade cement pressed brick**; that for **evenness of density, solidity and quality** are **Superior** to brick made by any other process. Easy capacity 2,500 or more pressed brick per day for one man according to ability of operator. The **Compound Lever** is simple and effective, the whole outfit is one of **genuine merit** and **Reliability**. If you want to know more, write

J. A. SODESTROM, Manufacturer

United States Patent No. 233,901.

SAC CITY, IOWA.

Tell 'em you saw it in ROCK PRODUCTS.

ARCHITECTURAL ORNAMENTS

—Pleasing Effects Can be Produced by the Use of Our—

BALL AND SPINDLE MOLDS



A GOOD PAIR—Dever's Ball and Spindle Molds.

The cost is light, but rich, effective beauty is secured to your work. No plant can be called complete without them. We provide for the necessity that has been holding the cement industry back. Write to

DEVER'S CEMENT WORKS, CASSOPOLIS, MICHIGAN.

DO NOT WAIT TILL OTHERS GET THE EQUIPMENT, IT WILL PAY FOR ITSELF ON ONE JOB.

High Grade Concrete Block, Brick, Post and Mixing Machinery



"We Have The Leaders." "The Big 7"

- 1 Normandin Concrete Block Machine (Face Side)
- 2 Peninsular Concrete Block Machine (Face Down)
- 3 Gemaon Concrete Block Machine (Face Side)
- 4 Champion Concrete Veneer Block Machine (Face Down)
- 5 Favorite Sand Cement Brick Machine
- 6 Systematic Concrete Mixer
- 7 Universal Cement Line, End and Brace Post Machine.

We are in the business. We can give you the best value for your money. Write us. Don't delay. Get started. Concrete

posts, blocks and brick are in demand. We solicit your trade because we can please you. Our machines are standard, adopted twice by the United States Government. Highest awards Universal Exposition, St. Louis, 1904, and Portland Exposition, 1905.

CEMENT MACHINERY COMPANY, JACKSON, MICHIGAN U. S. A.

DON'T PLACE YOUR ORDER

until you have investigated our line of

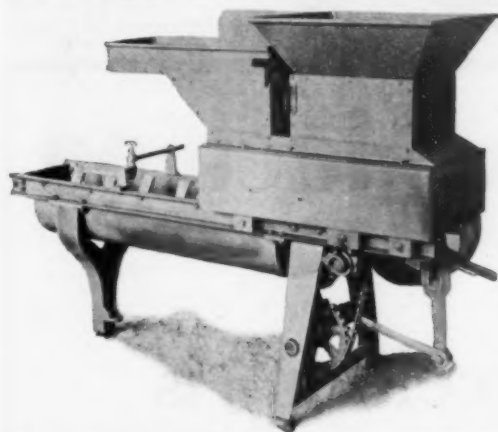
Practical Concrete Machinery

The Latest Improvements Provide for Higher profits to the Investor.

COMPLETE CATALOGUE NOW IN COURSE OF PREPARATION.

MANDT-POWELL CONCRETE MACHINERY COMPANY,

Stoughton, Wisconsin.



The Standard Continuous Concrete Mixer

"The Mixer that Measures and Mixes"

"You fill the Hoppers, the Mixer does the rest."

Continuous Automatic, Feed Exact Proportions.

Materials first Dry Mixed then "Tempered." Output instantly variable from 0 to Maximum at will of operator, thus insuring Fresh Material for each Block. Feeds Sand and Gravel Dry or Wet.

Write for description and prices to

The STANDARD MACHINE CO. KENT, OHIO



THE COMMON SENSE CEMENT BRICK MACHINE

Simple in construction, nothing to get out of order. Easily adjusted to make any size block and any kind of face.

John Strait, Rock Rapids, Iowa.

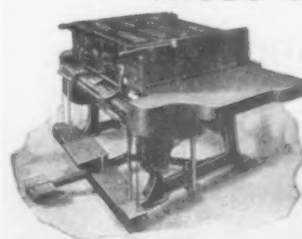
Waterproof Stop the Leaks with the Best and Cheapest Waterproofing on Earth.

The salvation of the Cement Block business depends on a reliable inexpensive waterproofing. We have it: costs but 15 cents per gallon. Formula for sale (shop right) for \$15.00. Send for further information and sample stone treated with this process.

—ADDRESS—

BENJ. L. SIMPSON, 3229 Charlotte St. Kansas City, Mo.

These Cuts Show Our 1906 Model No. 4 Chicago Machine.



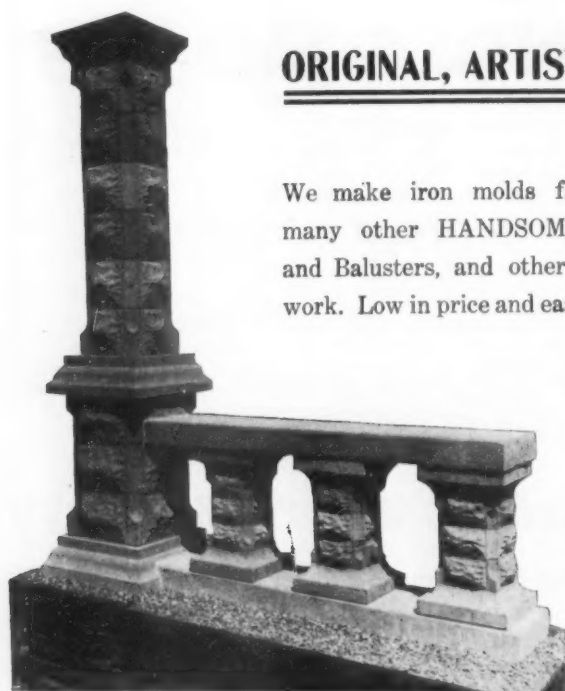
Cut on left shows Chicago No. 4 machine, set to mould 4 blocks at one time, each 6x12-in. Cut on right shows 2 blocks moulded, each 14-in. wide and 32-in. long. Any size or shape of block required in ordinary building construction can be moulded on this machine. We ship our machines on approval, and send our demonstrator to start your plant, or we will pay your railroad expenses here and return to look over our line and choose what you want. We manufacture more than 20 different styles of block machines, ranging in price from \$15.00 up. We are the largest exclusive manufacturers of block machines, moulds and tools. Make us a visit and we will show you more than 40 different styles of machines. OUR FACE DOWN MACHINES HAVE NO EQUAL. If we cannot please you, we pay your railroad expenses just the same, and you are out only your time. We have machines for making any size or shape of block, and any style of air space; we have side face and face down machines. We build MACHINES, not crude, cast boxes. Since our ad. first appeared in ROCK PRODUCTS, we have sold more than 100 outfits. We have equipped more than 2,000 plants and will furnish you list of names and addresses of users of our machines on request. Send us your order for one of our \$75.00 outfits; we will ship on approval, freight paid, and if not satisfactory after five days' trial, notify us and we will remove it. Write today for our 80 page catalogue, enclose 25 cents and we will mail you formula for waterproofing and coloring blocks. We will furnish enough of our waterproofing and coloring to waterproof and color 100 sq. ft. of surface for \$1.00. State color wanted when ordering. Be sure and tell us you saw it in ROCK PRODUCTS.



Cement Machinery Manufacturing Company,

Burlington, Iowa.

Porches in Concrete



ORIGINAL, ARTISTIC

We make iron molds for this and many other HANDSOME Columns and Balusters, and other ornamental work. Low in price and easily handled.

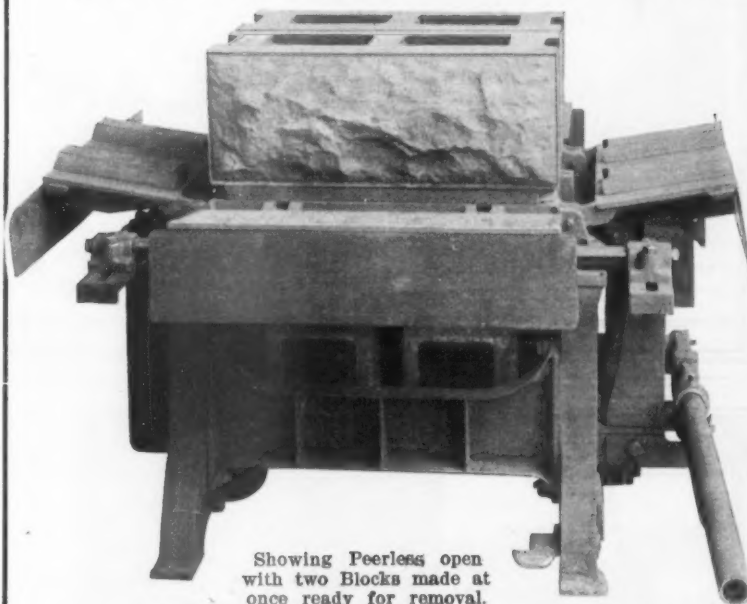
Our
Circular
Describes
Them.

SIMPSON CEMENT MOLD CO.,

351 Marshall Avenue,

COLUMBUS, OHIO.

THE Multiple - Automatic Peerless



Showing Peerless open
with two Blocks made at
once ready for removal.

The Machine of OUTPUT and VARIETY

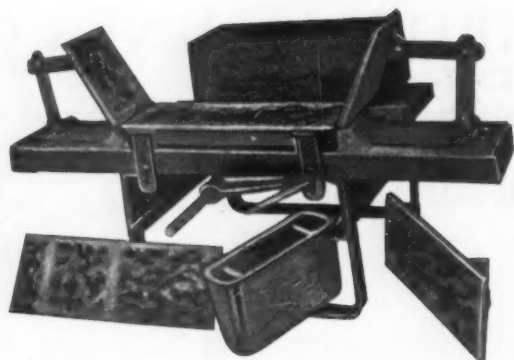
Can you tell from the above cut WHY the Peerless can produce 60% more Blocks with the same labor than other machines? If not, write for proof. You can discard your old machines for this one and make money. Others have.

PEERLESS BUILDING BLOCK MACHINE CO.

270 So. Pierce Street,

MILWAUKEE, WIS.

The Excelsior Block Machine



The "Excelsior" is

the latest improved. Excels all others. Makes blocks hollow or solid. Moulds blocks face down adjustable to any length, simple, accurate. Capacity and adaptibility unlimited. More durable and less expensive than any other machine on the market. Nothing to get out of order or to clog up. Write for full particulars and watch future announcements. Made by

Excelsior Manufacturing Co., Excelsior Springs, Mo.

Factory, 419 West 5th Street, KANSAS CITY, MO.

Tell 'em you saw it in ROCK PRODUCTS.

THE LATEST DEVELOPMENT COMPLETED

A Sensation in Cement Brick

Practical—Durable—Economical—Profitable

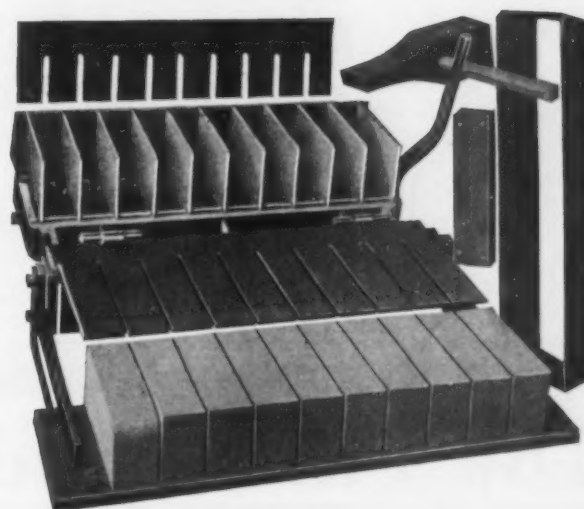
“PEERLESS” CEMENT BRICK MACHINE

(PATENTED)

The Peerless Cement Brick Machine is making brick for the new Minneapolis Armory.




All outside walls are made of cement sand brick, which are now being manufactured on the ground by the Peerless Cement Brick Machine.



PEERLESS CEMENT BRICK MACHINE.

Giving you a view after delivering a load. At the top stands the steel facing plate, used only in facing end brick. At the right are tamping mallet, collar and float. On the pallet are ten complete bricks, one showing a rounded corner. Attachments for all forms of ornamental brick furnished extra, and easily adjusted.

 A simple and inexpensive **One Man Machine**, made of iron and steel, producing perfect face or common brick of any color with sharp edges and of uniform size. One man has made on this machine, over 3,000 perfect brick, in ten hours. Prices right. SEND FOR CATALOGUE and PRICE.

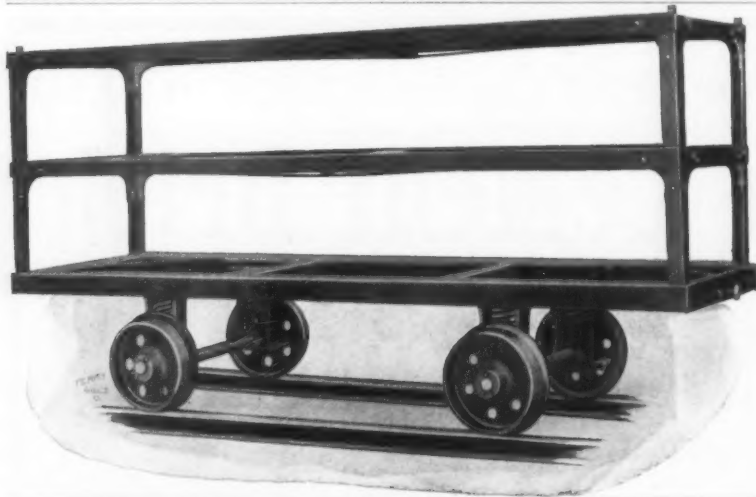
PEERLESS BRICK MACHINE CO.

Lumber Exchange,

Minneapolis,

Minnesota

tell 'em you saw it in ROCK PRODUCTS.



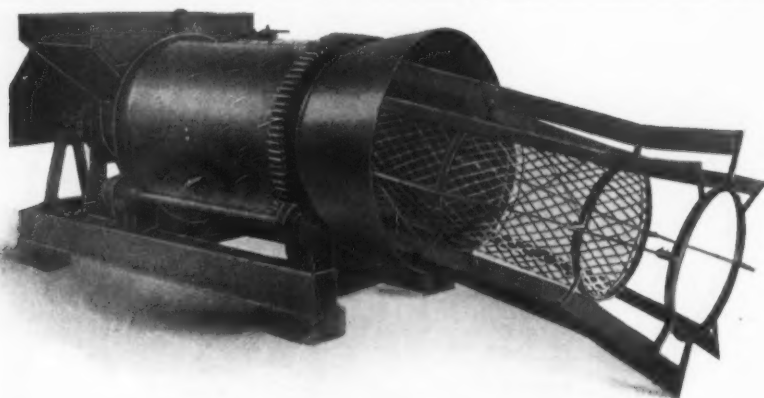
Roller Bearing Drying and Transfer Cars for Cement Block and Brick

Do not buy a car where the corner braces extend below the beams of the deck as they spoil the end blocks. The only car that has the center of the decks supported without the annoyance of center legs.

Write us for catalogue No. 5.

The Chase Fdy. & Mfg. Co.

COLUMBUS, OHIO.



PHILLIPS CONTINUOUS CONCRETE MIXER

SCIENTIFIC, PRACTICAL, SUBSTANTIAL

Built in two sizes. No. 1, Capacity of 70 to 100 cubic yards per day. No. 2, Capacity 50 to 75 cubic yards.

This is the only mixer having a portable inside, removable for cleaning the blades.

A more satisfactory mixture is obtained on this machine than by measuring the several materials and water by bulk.

A test can be made at any time while operating, and the amount of water controlled to meet the requirements, of either wet or dry mix.

WILLIAM H. PHILLIPS, 705 Oakwood Ave., COLUMBUS, OHIO.

PATENTED.

Phillips Mixer in Position for Cleaning.

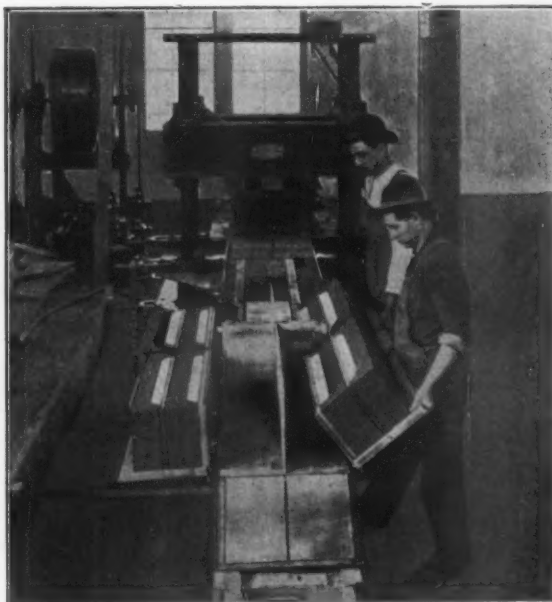
The Fisher Hydraulic Stone System

**A Success
A Money Maker
No Experiment**



This outfit consists of a genuine HYDRAULIC PRESS, and carefully constructed machinery, and has a SHIPPING WEIGHT OF 25,000 POUNDS.

The cut illustrates the Fisher machine operating and delivering eight angular blocks at one pressing, requiring less than one minute to pound them into shape, under a 200-ton pressure.



**The Only Machinery
Put Out for the Manu-
facture of Concrete Blocks**



This outfit is capable of PRODUCING 1,500 CUBIC FEET of material, formed into the shape desired, in ONE DAY'S WORK.

APPLY FOR FURTHER INFORMATION.



FISHER HYDRAULIC STONE AND MACHINERY CO.

Builder's Exchange Building

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BALTIMORE, MARYLAND

Tell 'em you saw it in ROCK PRODUCTS.



The Sanders Brick Machine

For making sand and cement brick, sand and lime brick, any brick, all shapes and sizes. This machine makes the finest face brick of any machine on the market; every brick is perfect with fine, smooth-face and sharp, square edges, every brick a pressed brick. This machine makes plain brick, ornamental brick, molded brick, all shapes and sizes, building blocks, rock face, tool face, panel face, plain face with V joint and brick face, fancy belt courses, corner blocks, combination brick cornice, fine porch columns, porch piers, lattice work, wall trimmings, chimney tops, paving blocks, archways, wainscoting and tiling for vestibules and hallways, stair steps and risers figured and paneled, for inside and outside stairs, also many figures in terra cotta work can be made on this machine, and made any color by using the chemical coloring.

Two men can make 4,000 to 6,000 brick a day, 1½ bbls. of cement to 1½ yds. of sand will make 1,000 good brick; 2 bbls. of cement to 1½ yds. of good, fine sand will make 1,000 fine face brick, style and variety of work unlimited. It pays every time to buy the best machine. With good sand and good cement you only need one of our machines to make the best and finest cement work that can be made. Send for our catalogue in which you will see cuts made from work on this machine—seeing is believing—it is acknowledged by experts to be the best machine on the market for cement work. Be sure that you are right, then buy our machine which makes everything right.

Catalogue Free.

READING BRICK MACHINERY CO., OFFICE: 405 Baer Building, READING, PA.

The Latest and Highest Achievement in Concrete Block Machinery "The Winget 1906 Model"



This machine has the great distinction of being the only UNIVERSAL machine on the market. It is universal because it perfectly combines all the three different kinds of machines into ONE. It makes everything that all the others can make and a number of things they cannot make.

It is first an UPRIGHT machine, which has never been equaled in its advantage of wide range of adjustment, great speed, economy and simple operation.

It is secondly a FACE DOWN machine which excels all others in points of convenience and practicability and especially in that it gives a finished molded surface to all sides of the block, a great advantage which no other possesses.

In the third place it makes TWO-PIECE blocks, and produces two in one operation. Although it covers the widest range and the several phases, it is remarkable in that its movements are all controlled by one simple automatic lever. This machine meets with nothing but universal praise.

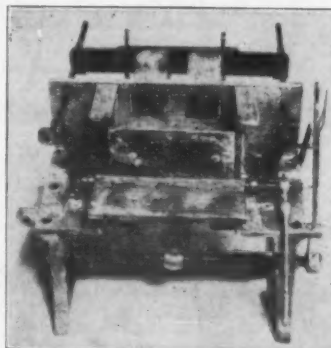
The only Concrete Block machine to receive award at the Portland Exposition was the Winget 1906 Model.

For full particulars regarding the Winget System of Concrete Machinery including power tamper and mixer, address the

Winget Concrete Machine Co.,
COLUMBUS, OHIO.

BRANCHES: New York Chicago St. Louis Pittsburg Los Angeles Greensboro, N.C.

The "Reed" Machines are in the Lead



TIME IS MONEY! Why not save TIME and make MONEY? Why use a MACHINE that you tear down and set up every time you manufacture a block? Why "NOT" use a MACHINE when adjusted for the dimension of block desired which manufactures blocks and NOT WASTE TIME in tearing down and setting up for every block of the same dimension produced?

The "REED" Face Side and Face Down Block and Brick machines are simple, rapid and adjustable. Blocks and Bricks are raised or turned out of the machines.

Capacity 350 to 600 blocks and 6000 brick in ten hours. If interested it will pay you to write us at once.

DOWN FACE MACHINE

WICHITA COAL AND MATERIAL CO., Wichita, Kan.



The Stringer Cement Block Machine

Latest Improved, Handiest,
Quickest Adjusted.

Will make Blocks any size
from a brick up. Water Tables,
Sills, Angles, Gables, Culvert
and Sewer Blocks—

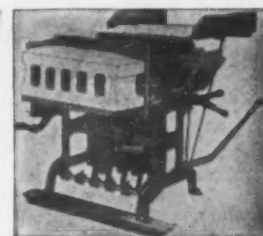
HOLLOW OR SOLID.

STRINGER MACHINE CO., Jackson, Mich.

IT IS A QUESTION OF ECONOMY

in buying a Concrete Building Block Machine the same as any thing else. You want the best, at the same time the cheapest. The SIMPLICITY fills both of these requirements.

Write for catalogue and further information.



"THE SIMPLICITY."

The Standard Sand & Machine Company,

Manufacturers of Labor Saving Machinery.

Address Dept. "D."

CLEVELAND, OHIO.



THE X-L CONCRETE STONE MACHINE

Possesses the most modern improvements.

Simple, Durable, the most Efficient and Economical. Mold Box Scientifically Correct in Size and Rigidity for Perfect Blocks.

Makes a variety of over 1000 Blocks. Makes all width Walls (OVER 2 INCHES)

All blocks made on the same machine, and the same shaped pallets.

THE X-L TWO PIECE SYSTEM MAKES WATER PROOF WALLS.

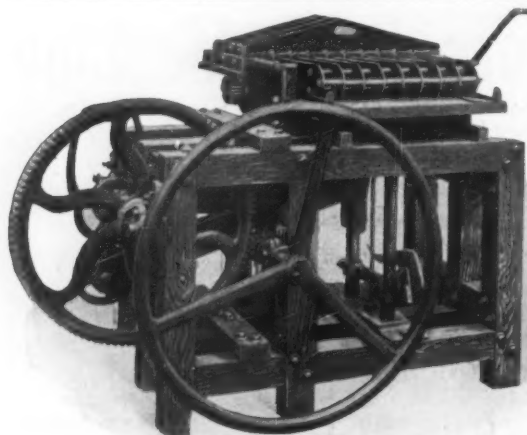
Machine and System combined makes Business a Success.

IT SAVES by making inside blocks thicker than face blocks, by reducing cores, by not having to face blocks, or furr lath and plaster walls in operating machine and in handling and laying blocks, UPWARD OF 50 per cent.

Our Self Loading and Unloading Truck, ANOTHER LEADER.

E. E. EVANS, General Agent, Dept. B, 111 West 18th St. KANSAS CITY, MO.

Tell 'em you saw it in ROCK PRODUCTS.



The Spears Concrete Brick Machine

Hand or Motor Power. Press or Tamp. A plant in itself. Capacity 6 to 12,000 per day. Can be hauled on one horse wagon. Face of brick always presented. Can make plain or veneered brick of any form or block. The machine to make first brick to meet all requirements of New York building department. Simple and strong, using common labor. Apply to

H. H. SPEAR, Louisville, Ky.

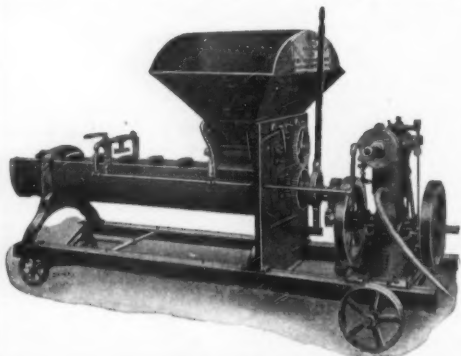
OR

J. ADGER STEWART, Highland Park, Ky.

Sole Assignee for 11 Southern States, Ky. and Mich.

DO NOT BUY A MIXER

Without seeing this machine.
Shipped on approval.



We manufacture a full line of Block Machine Mixers, equipped with gasoline or steam power, also Hand Mixer. Do not fail to get our prices before buying. Also see us at Milwaukee.

Eureka Machine Co.,

SUCCESSORS TO

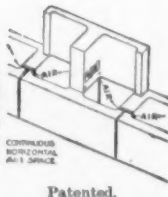
Brady Cement Stone Machine Co., Ltd.

North Jackson Street,

JACKSON, MICHIGAN



**HOLLOW
CONCRETE
WALLS and
PARTITIONS.
TWO-PIECE
SYSTEM**



Patented.

Would You Like to Learn

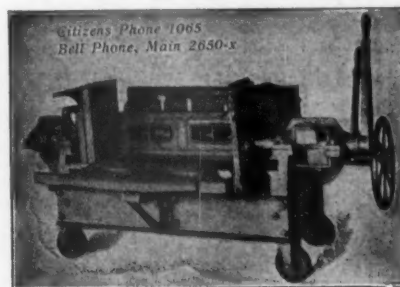


"In the Engineering News of Oct. 5th and 12th, 1905, were published the papers awarded the first and second prizes in a widely advertised competition, each of which papers is a very able treatise advocating our system of construction."

THE AMERICAN HYDRAULIC STONE CO., Century Bldg. Denver, Col.

THE HAYDEN AUTOMATIC BLOCK MACHINE CO.

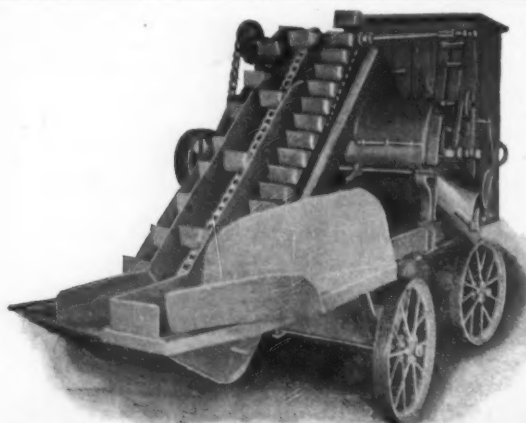
112 West Broad Street, (P. O. Box 530.) COLUMBUS, OHIO.



Simplest, most complete and swiftest machine on the market. Only perfect machine making face of block in horizontal position, producing most satisfactory work and variety of designs, impervious to moisture. All blocks released and delivered automatically to a support in front of the machine, ready to be removed for drying.

Write us for Catalogue before purchasing.

New York and Foreign Office: HAYDEN AUTOMATIC & EQUIPMENT COMPANY, 26 Cortlandt Street, New York, N. Y.



THE CONNOLLY King of All Cement and Concrete Mixers

Maximum Capacity 350 Cubic Yards in Ten Hours. Guaranteed to Do 250.

Operating at one-half (175 cubic yards) its capacity, it furnishes a thorough and perfect 30 seconds Dry Mix of Sand and Cement, followed by a Wet Mix of all ingredients for a like period.
Fed at the ground direct from wheel-barrows it saves 50 per cent Labor in Feeding, and guaranteed to make more and better concrete every hour than any hand fed or fed in the air machine on earth.
Adjustable Buckets Measure Accurately the right proportion of material.
It is its own inspector and a veritable slave driver.
Portable, 14x7, operated by 6 horse power gasoline engine, and fully equipped weighs less than 3 1/4 tons.

Send for Booklet "D"

We also make and sell the "GRANT," the best little Mixer on the market. It has the mix of the famous CONNOLLY, a capacity of 25 to 40 cubic yards per day. Equipped with its 3 horse power engine weighs 2,000 lbs. Mixes Wet or Dry Concrete, and admirably adapted for Concrete Block Work.

UNITED STATES CONCRETE MACHINE CO., Majestic Building, Detroit, Mich.



HARMON S. PALMER'S LATEST INVENTION IN
**Hollow Concrete
Block Machines**

ADVANCING THE INDUSTRY ONE HUNDRED PER CENT.

PRICES REDUCED,

THE ORIGINAL INVENTOR'S



H. S. PALMER.

Combination Automatic SELF CLOSING Block Machine

The greatest advancement since the industry was started. BLOCKS OF EVERY SIZE, LENGTH, ANGLE, HEIGHT and CONTOUR produced with astounding ease and rapidity. A MARVEL OF INGENIOUS ATTACHMENTS to the machine which has made more buildings than all infringers and imitators combined. The crystallizing of every merit in the industry to date.

Infringers Prosecuted. Many Injunctions, Many Suits Pending.

GOOD AGENTS, LIVE FACTORIES AND LAWYERS WANTED.

Harmon S. Palmer Hollow Concrete B. B. Co., Washington, D.C.

Adopted by the United States Government.

WRITE FOR CATALOGUE "T."

ON THE HIGH WAVE OF POPULARITY.

**The Ideal Hollow
Concrete Block Machine.**



Not a new machine. Tried and tested over two years. Satisfied users everywhere. Interchangeable to various widths. Adjustable to sixteen lengths. No wheels, cogs, gears, chains or cranks.

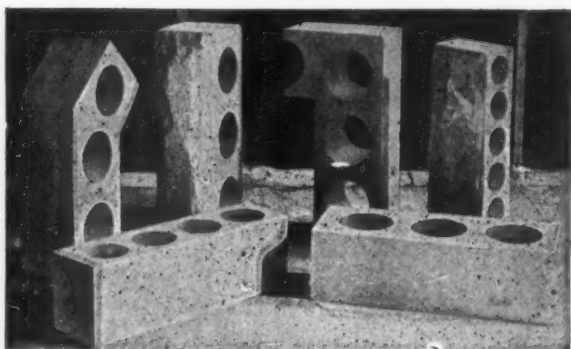


Nothing to Clog, Creak or Get Out of Order.

Simplicity, Rapidity, Adaptability, Durability. Face formed in bottom of the mold. Cores withdrawn horizontally by lever. Guaranteed Capacity—Two men, 10 hours, 200 blocks. Portable—Can be carried by two men. Over 200 in use in the State of Indiana alone. The only machine by which can be accomplished the facing of blocks by the Borst System. A business proposition to the maker of blocks. An appeal to the common sense judgment of the builder. In corresponding with us we make our business your interests.

IDEAL CONCRETE MACHINERY CO., South Bend, Ind.

Tell 'em you saw it in ROCK PRODUCTS.



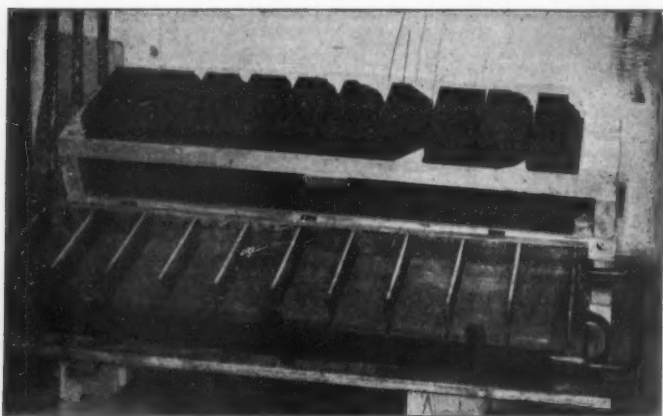
The Stevens Cast Stone Has No Rival

IT CAN BE SEEN IN THOUSANDS OF BUILDINGS

Carnegie Libraries, Churches, Schools, Bank Buildings, Business Blocks, and Dwellings. Made without tamping or pressure. Our process overcomes the two great objections to concrete blocks, viz.: the absorption of moisture and artificial appearance.

SEND FOR CATALOGUE

Stevens Cast Stone Co. 808 Chamber of Commerce
CHICAGO, : : : ILLINOIS



Here is what you have been looking for!

Cement Brick Machine

Makes 10 perfect brick per minute with two unskilled workmen.

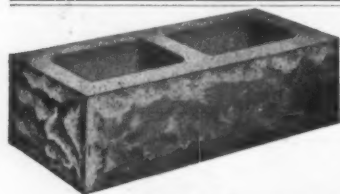
Be your own brickmaker.

Can be changed from plain to ornamental brick or vice versa with no loss of time or extra expense.

E. W. SEAMANS,

25 Fountain Street,

GRAND RAPIDS, MICH.



MOVE THE MACHINE—NOT THE BLOCK

Saves labor of offbearing, loss by damage or breakage. Avoids necessity for heavy and expensive iron pallets. Reduces cost of plant and cost of operation. Everybody knows that concrete should not be disturbed after it is moulded or while it is setting, but this is the only machine with which it is possible.

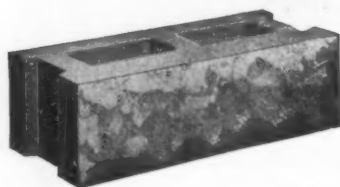
PETTYJOHN

Blocks cost 6 cents to make—Sell for 18 cents. One man can make 200 Blocks per day. Whole outfit costs \$125.00. Figure the profits.

GUARANTEED EVERY WAY—SENT ON TRIAL

THE PETTYJOHN COMPANY

514 NORTH 9th STREET TERRE HAUTE, INDIANA



The Walton Stone Machine

AUTOMATIC, ADJUSTABLE
MAKES DRY WELLS

Makes lengths from 4 to 32 in. and 3, 4½, 6 and 9 in. heights. 10, 12, 14 and 16 ft. radius circles. 30 and 45 degree angles. All widths by lapping blocks. All shapes, lengths and widths made on the same pallet. Reducing cores save material.

LET US TELL YOU

How we save labor, save material, save pallets, save expensive facings, save 8 cents per cubic foot over other machines by our method.

The Walton Stone Machine Co.
2500 East 18th Street, KANSAS CITY, MO.



Red, Brown,
Buff and Black
**MORTAR
COLORS**



The Strongest and Most Economical in the Market.

Our Metallic Paints and Mortar Colors are unsurpassed in strength, fineness, and body, durability, covering power and permanency of color. Write for samples and quotations.

CHATTANOOGA PAINT CO., CHATTANOOGA, TENNESSEE.

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THE PERFECTION

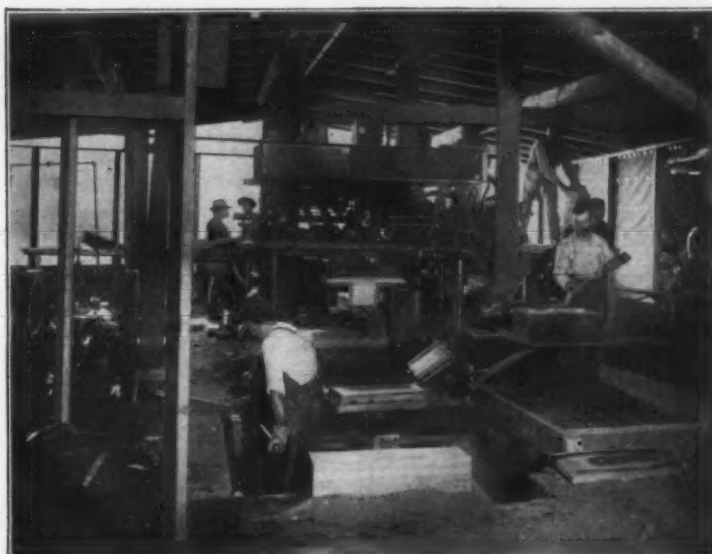
POWER BLOCK MACHINE

For Making Hollow Concrete Blocks.

100 TON PRESSURE
ON EVERY BLOCK.

600 TO 1000 BLOCKS
PER DAY.

THIS WONDERFUL WORK ACCOMPLISHED WITH FIVE MEN AND INCLUDES ALL THE LABOR FROM THE RAW MATERIAL TO THE FINISHED PRODUCT.



HIGHEST
QUALITY OF
PRODUCT.

GREATEST
SPEED OF
OPERATION.

THE ABOVE CUT SHOWS THE "PERFECTION" POWER BLOCK MACHINE IN OPERATION AT THE MIDWAY PLANT OF THE TWIN CITY RAPID TRANSIT COMPANY'S NEW SHOPS WHERE THERE ARE THIRTEEN MAMMOTH BUILDINGS IN PROGRESS OF CONSTRUCTION, WHICH WILL REQUIRE 600,000 "PERFECTION" POWER BLOCKS, THE WORLD'S LARGEST CONTRACT FOR HOLLOW BUILDING BLOCK. A PROOF THAT THE "PERFECTION" IS BEST.

The Only Machine Making Hollow Block Under High Pressure.

OUR MACHINE MADE THE SAND-LIME BLOCK ON EXHIBITION AT THE SAND-LIME BRICK CONVENTION, DETROIT.

THE PERFECTION BLOCK MACHINE CO.

Kasota Building, Minneapolis, Minn.

WRITE US FOR FULL PARTICULARS.

Tell 'em you saw it in ROCK PRODUCTS.

How Many Thousands of Cement Stone Buildings Will be Erected in 1906?

There's a question Contractors, Builders and all who have to do with building may well ask themselves.

The enormous use of Cement Stone in buildings of all kinds during 1905 has compelled the conservatives in the building trade to "sit up and take notice."

The increase in 1906 over 1905 will be marvelous; better perhaps, to say phenomenal.

Builders can no longer ignore the sterling value of perfectly made cement blocks, either from the standpoint of economy or artistic beauty.

Men with foresight in the building trades all over America and even across the sea are falling in line, and are looking for the best Cement Stone Machine made.

In choosing a cement stone machine don't be carried away with the vociferous shouting and constant clamoring of manufacturers who claim without reason that their machine is the best, or even better than the best.



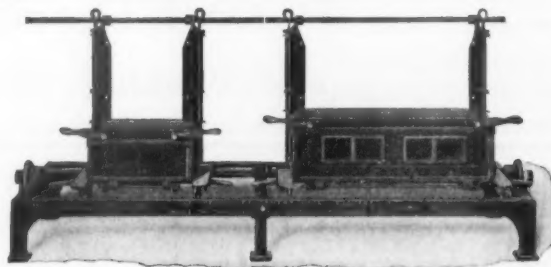
The Hercules 1906 Model Cement Stone Machine Is

Not better than the Best,
But better than the Rest.

A fact that is easy to prove to any intelligent Builder or Contractor who will take the trouble to write for our new beautifully illustrated Catalog.

The simplicity of construction in the Hercules is one great feature—No Cogs, No Chains, No Springs—this combined with its automatic action and accurate mechanism, and the combination arrangement which permits two stones of different sizes to be made on the one machine at the same time is the reason that the Hercules makes more blocks in less time and for less money than any other machine.

The Hercules is an adjustable machine—perfectly and easily adjustable—and that is why it can make blocks ranging in size from two inches to six feet, accurately and perfectly, cutting the item of labor in two.



Being simple in construction, the Hercules is easily kept clean and does not require high priced labor to operate.

In the Hercules the plate that makes the face of the stone rests on the bottom. This allows the operator to tamp directly on the face, enabling him to get a very clear and accurate impression of the design which comes out as natural as cut stone. Tamping directly on the face also permits the builder to make a stone with a fine, clean cut face and a coarse back—a clear saving of material.

If you are going to own a machine you will want the one that will make the strongest blocks, blocks with a crushing strength equal to natural stone.

Well, that's just why we call this machine **The Hercules**—the name denotes strength, wonderful strength—and the Hercules Machine does not belie its name, for with our method of tamping with a big flat tamper the Hercules makes stronger stone than can be made on any other machine.

The Hercules makes solid blocks and hollow blocks. The hollow blocks are made with more air space than those made on other machines, which, as you can readily see, means a great saving in material which means money.

You can smile at competition if you have a Hercules; smile right out loud if you choose, for you can make blocks much cheaper, much stronger, much more natural looking than any competitor who uses any other machine.

You can make a larger number of designs too; over fifty half-tone designs of facings are shown in our new Catalogue.

On the One Machine, **The Hercules**, you can make in addition to solid and hollow stone: Water Tables, Window Sills, Lintels, Coping, Steps, Flagging and the like.

We want you to send for our new Catalogue L, showing our **1906 Model**—we want to prove to you that the Hercules will do anything that's worth doing, better than any other machine, and will do other things besides.

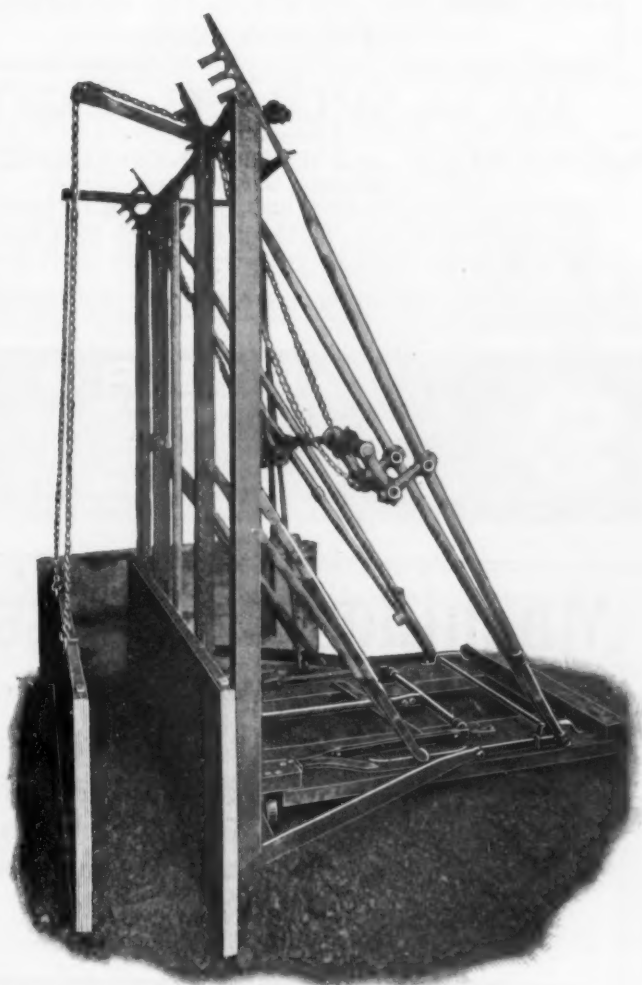
Send for Catalog L today. Lumber is going higher—natural stone won't go lower, that's a sure prophesy, and Cement Stone is the building material of the future. Catalog L will tell you lots of things you ought to know about stone making.

Century Cement Machine Company, 179 W. Main Street, ROCHESTER, N. Y.

Tell 'em you saw it in ROCK PRODUCTS.

PROFIT WINNERS

Pauly's Concrete Wall Machine



PAULY'S CONCRETE WALL MACHINE.
READY TO BEGIN THE CONSTRUCTION OF A WALL.

For Monolithic and Reinforced Concrete Construction.

The only machine that has yet successfully done away with false work in concrete construction, and sold upon a positive WRITTEN GUARANTEE.

The latest improvement that has been put on this machine reduces the labor cost from 40 to 50 cents on every perch.

Immensely Successful Everywhere

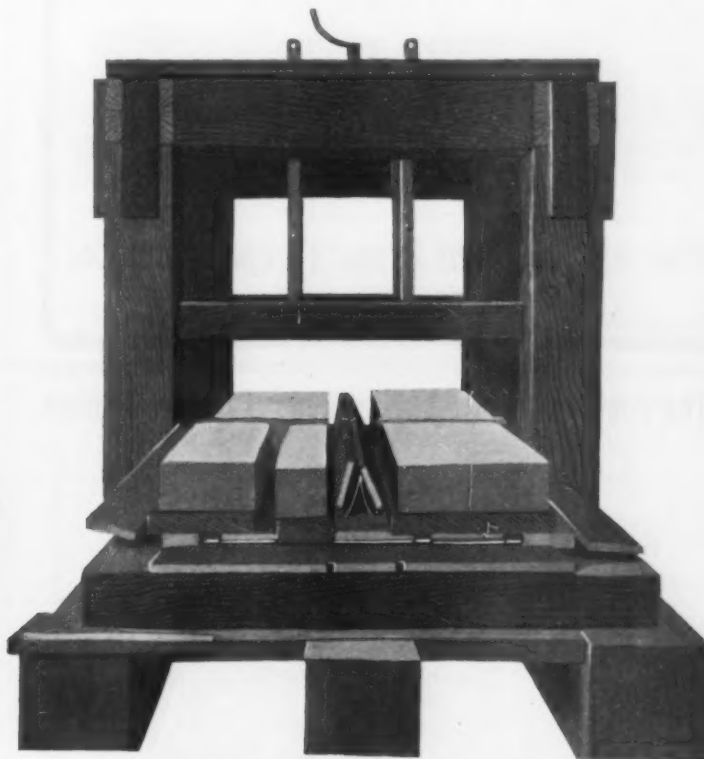
NOT A COMPLAINT WHERE INTELLIGENTLY USED.

THE LATEST AND BEST—A DISTINCT ADVANCE.

Pauly's Hollow Concrete Veneering Block Machine

FOR ACTUAL BROKEN ASHLAR CONSTRUCTION.

Complete plants equipped with hand or power press and outfit of molds for every size block required in the system. Drawings furnished for steaming chamber, giving details for slides and racks, or specially designed steaming cars and tracks supplied when desired. Successful, practical operation demonstrated every day with big profit.



PAULY'S HOLLOW VENEERING BLOCK MACHINE.

This is the Machine that has Long Been Needed to Make Perfect the Concrete Building Block Idea.

Can make blocks all one size 12 x 24 inches with mortar pointing space of $\frac{3}{8}$ -in. subtracted, or broken up into any fractional size desired. The bed of moulding press is so constructed that it is impossible to leave out the mortar space calculation.

A GREAT SAVING OF MATERIAL IS GUARANTEED.

The labor cost in properly equipped plant in daily operation has been determined at 1½ cents per surface foot, when producing hollow concrete veneering tile.

Freezing Weather has no Effect in operating by the Pauly System.

HANDSOME ILLUSTRATED CATALOGUE SENT FREE. WRITE TO THE

Concrete Stone and Sand Company, Youngstown, Ohio.

Tell 'em you saw it in ROCK PRODUCTS.

MIXER VS. MIXTURE



We make the mixer—
You make the mixture—
Without a good mixer—
You can't get a good mixture.

Our American mixer is good—all that the name implies—new, modern, up-to-date, honest, to be depended upon, and a "Mixer"; just like any genuine American citizen. Compare it from any standpoint with the other kind and the result is like comparing the Yankee with the Russian.

A REAL AMERICAN

It feeds while running, discharges instantly, is self-cleaning, does not "ball" or "roll" and MIXES. Send for catalogue "I".

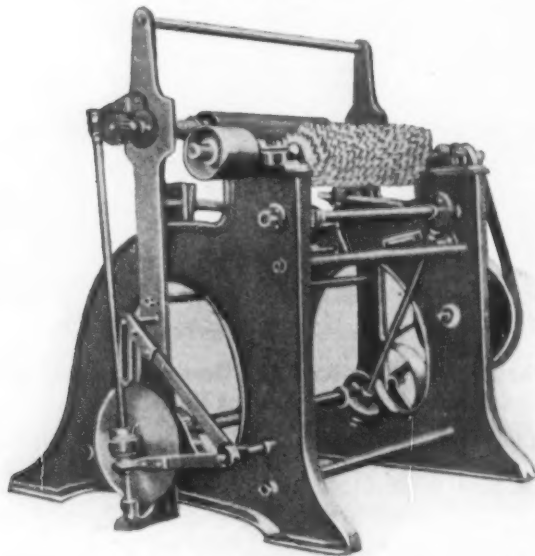
Manufactured By

The International F. and Fireproofing Co.

Columbus, Ohio.

"The Cochran" Automatic Wood Fibre Machine

(PATENTS PENDING)



There is positively nothing cheap or shoddy about this machine, either in workmanship or material.

There are no Sprocket Wheels or Chains, no Cone Pulleys or Cog Wheels to break, get out of order and cause trouble. All the power is transmitted with bevel gears adjusted to "run like a watch."

We call special attention to the "speed increasing mechanism" and automatic action of our machine. When the log is reduced to the size of 2 inches the carriage is automatically released, and swings back to place without being touched by the operator, while at the same time the log stops revolving, without interfering with the other parts of the machine.

The log when finished is revolving six times as fast as at the start and all done automatically and continuously.

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Concrete Engineering and Equipment Co.

Butler, Pa.

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Garry's Genuine Charcoal Iron Roofing WILL NOT RUST

If properly cared for. Roofs put on forty and fifty years ago are now good.

Manufactured Exclusively by
THE GARRY IRON AND STEEL CO.
CLEVELAND, OHIO.

W. C. WULFF & CO.

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SHEET-METAL and HEATING CONTRACTORS

—MANUFACTURERS OF—

GALVANIZED IRON AUTOMATIC FIRE-PROOF WINDOWS, CORNICES,
SKYLIGHTS, TANKS, ETC., SLATE, TILE, TIN AND IRON ROOFING,
SHEET-METAL CEILINGS, —WARM AIR FURNACES.

Office and Factory, 601, 603, 605 E. Jefferson St. LOUISVILLE, KY.



DRYERS

OF EVERY TYPE

CONSTRUCTED FOR ALL PURPOSES.

BEFORE PLACING YOUR ORDER CONSULT

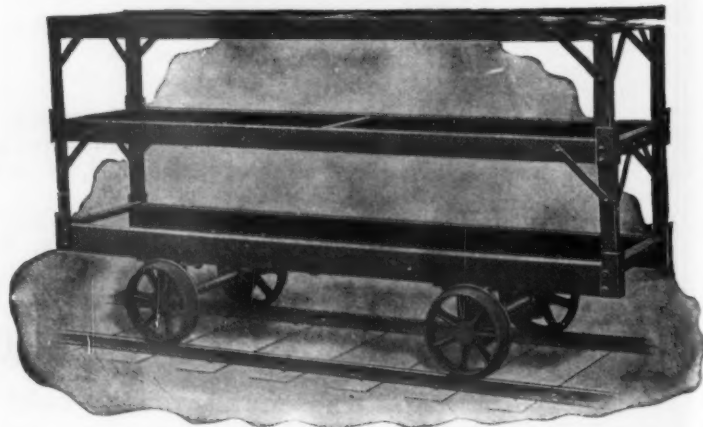
UNITED STATES DRYING ENGINEERING CO.

56-70 BEAVER ST., NEW YORK, U.S.A.

Machines and Presses

For Concrete and Clay Products of all kinds.

CARS, roller bearing, for Concrete Block, Clay Brick, Dumping and Warehouse Cars of all description. Write us for Catalogs.



The Ohio Ceramic Engineering Co.

50 FALL STREET,

CLEVELAND, OHIO.

Tell 'em you saw it in ROCK PRODUCTS.

**FLEXIBLE
ELASTIC
FIRE PROOF**

**ORR'S
"MASTIC" BRAND**
PATENTED AND GUARANTEED

**NO SAND
NO LIME
NO HAIR**

"Mastic" Wood Fiber Wall Plaster is the restoration of one of the lost arts. To produce plaster without the use of sand, lime or hair is very novel yet this is what genius has accomplished—"Pozzuolana Product." For strength, durability, easy working, it has no equal. "MASTIC" is endorsed by architects, builders and contractors alike as the ideal wall covering. Full plans for equipping new mills furnished with territory rights. Patents on machinery and formula process. Owned and controlled by W. H. ORR, Secretary and Manager of the

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MAIN OFFICE: 607 State Life Building, INDIANAPOLIS, IND.
FACTORY OFFICE AND WORKS: 1705 West Washington Street.

METAL LATH

Bostwick Expanded Metal

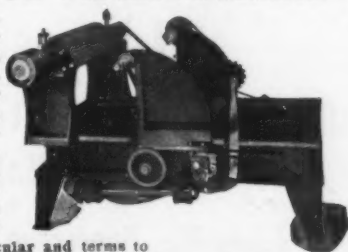
BOSTWICK FIRE-PROOF STEEL LATH

For Plaster Walls and Ceilings, Concrete Reinforcement. Our Flat Lath the Stiffest and Most Economical Metal Lath on the Market.
WRITE FOR SAMPLES AND PRICES.

BOSTWICK STEEL LATH CO.,
NILES, OHIO.

THE LEONARD WOOD FIBER MACHINE

Has an Automatic, Proportional, Increasing Feed, which keeps grade of fiber uniform from start to finish, and holds machine to highest possible rate of production for the grade of fiber and number of saws. Does not begin with fiber and end with dust, nor fall off in rate of production on each log, from 40 to 80 per cent. as do the ordinary non-increasing feed machines. Works logs up to 24 x 24 inches. No royalty string attached to sale. Pay no attention to misrepresentations of our competitors but write for descriptive circular and terms to



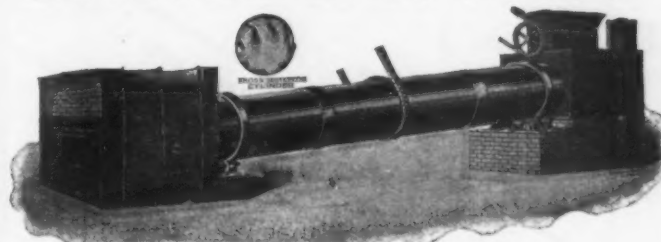
THE ELYRIA MACHINE WORKS, Elyria, Ohio.

ELYRIA MACHINE WORKS, Elyria, Ohio.

Gentlemen:—We are very much pleased with your machine, as is evidenced by the fact that we are ordering the second one from you. This last machine will take the place of a machine, which we have found takes more power to run, with about one-third the output of your machine.

Yours truly,
A. WALKER, Vice Pres.,
Acme Cement Plaster Co., St. Louis, Mo.

SAND DRYER



Dryers, Screens, Elevating and Conveying Machinery, Mixers, Concrete Building Block Machinery of all kinds, Power Tampers, Etc.
Ask for catalogue and prices.

The Standard Sand and Machine Company,
CLEVELAND, OHIO.

WOOD PLASTER

The Coming Wall Covering

WE ARE THE ORIGINATORS.

After several years of experimental work we have reached **SUCCESS** and our goods are recognized as of the highest quality.

We wish to establish our trade in every important market, and will give local capital and local talent an opportunity to go in with us in the erection and operation of

MIXING PLANTS

Using our **IMPROVED MACHINERY** and **FORMULAS**.
The management of the local plant to remain with **LOCAL INTERESTS**.

Write us for full information.

The ELYRIA WOOD PLASTER CO., Elyria, Ohio.

THAT'S IT

The Brand that's
in Demand.



The New
Independent Mill.

Cement Plaster.

MANUFACTURED BY

The Plymouth Gypsum Co. FORT DODGE, IOWA.

SPECIAL MACHINERY AND FORMULAS

FOR THE MANUFACTURE OF

**WOOD FIBER PLASTER, FIRE PROOF-
ING AND KINDRED PRODUCTS.**

The Ohio Fiber Machinery Co.

We furnish the latest improved FIBER MACHINE, (fully patented), also FORMULAS, on a reasonable proposition. The strongest companies and oldest manufacturers are operating under my contracts.
WRITE FOR TERRITORY.

J. W. VOGLESONG,
GENERAL MANAGER.

Elyria, Ohio.

STONE WALL PLASTER

Manufactured and sold.

A. B. MEYER & CO., INDIANAPOLIS, IND.

Meyers German Cement Repairs Stone of Every Kind.

Used by many leading Stone men, and is the **BEST PREPARATION IN THE WORLD.** Write for particulars.

LELAND & HALL CO., 557 Fifth Avenue, NEW YORK, N. Y.

Tell 'em you saw it in **ROCK PRODUCTS.**

H. L. Graf, Pres. E. T. Slider, Vice-Pres. & Gen'l Mgr. Osborne G. Reilly, Sec. & Treas.

New Albany Wall Plaster Co.

(Incorporated.)

MANUFACTURERS OF

Star and Wood Fiber Wall Plaster.

NEW ALBANY, IND.

We wish to announce to the trade that we are now running and at the present time, are in position to fill all orders promptly. Those who have used our goods claim it is the finest they ever had.

If you have not tried it, we are sure it would be to your interest to do so.

Prices always right and your orders solicited.

NEW ALBANY WALL PLASTER CO.,

Cumberland Phone 408.
Home Phone 137.

NEW ALBANY, IND.

THE COLOR QUESTION "SETTLED"

RICKETSON'S MINERAL COLORS

STRONGEST MADE, STOOD THE
TEST FOR 18 YEARS.
NEVER FADE.

*The Universal Exposition, St. Louis, 1904, gave us the
Highest Award—can we add more?*

Red, Brown,
Buff, Purple, Black.
For Clay, Cement Brick,
Building Blocks, Mortar, etc.

Ricketson Mineral Paint Works
MILWAUKEE, WIS.

PATENT SOAPSTONE FINISH

PLAIN AND IN COLORS FOR WALLS AND CEILINGS.

Patent Soapstone Mortar.

Prepared in any color for Laying Pressed and Enamelled Brick,
Stone Fronts, Terra Cotta, Chimneys, Fire Places, Etc.

The Dodge Blackboard Material or Artificial Slate.

The Potter Blackboard Material.

SOAPSTONE MICA. CONCRETE DRESSING.
CRUSHED, GROUND AND BOLTED SOAPSTONE.

AMERICAN SOAPSTONE FINISH CO.
G. P. DODGE, Proprietor. CHESTER DEPOT, VT.

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STUCCO RETARDER

Our Stucco Retarder is both strong and uniform, and will not deteriorate with age.

PREPAID SAMPLE SENT UPON REQUEST.

CHEMICAL STUCCO RETARDER CO.,

Incorporated 1895.

WEBSTER CITY, IOWA

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SHARP BROS. CO.

MANUFACTURERS OF

Buckeye Wall Plaster

Dealers in Builders' Supplies, Lime, Hair, Plaster of Paris, Etc.

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500 Himrod Avenue.

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MANUFACTURERS AND JOBBERS

Wheeling Plaster and Builders Supplies.

WHEELING, - - WEST VIRGINIA.

Lowest Special Homeseekers' Rates

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"THE HENDERSON ROUTE"

In connection with all other routes. Tickets on sale November 7th and 14th, December 5 and 19th. All tickets will bear final limit 21 days in addition to date of sale.

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"Big Four Route"

(New York Central Lines)

BEST LINE TO

Indianapolis, Peoria, Chicago, Toledo, Detroit,
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AND ALL POINTS EAST.

Information cheerfully furnished on application at
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General Agent Passenger Department.

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Their Retarder is both strong and uni-
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RETARDER

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STUCCO RETARDER

We guarantee our retarder as strong as any made and to be absolutely uniform in strength.



VIEW DURING CONSTRUCTION.

All shipments made from large stock of properly aged material. Insuring uniformity.

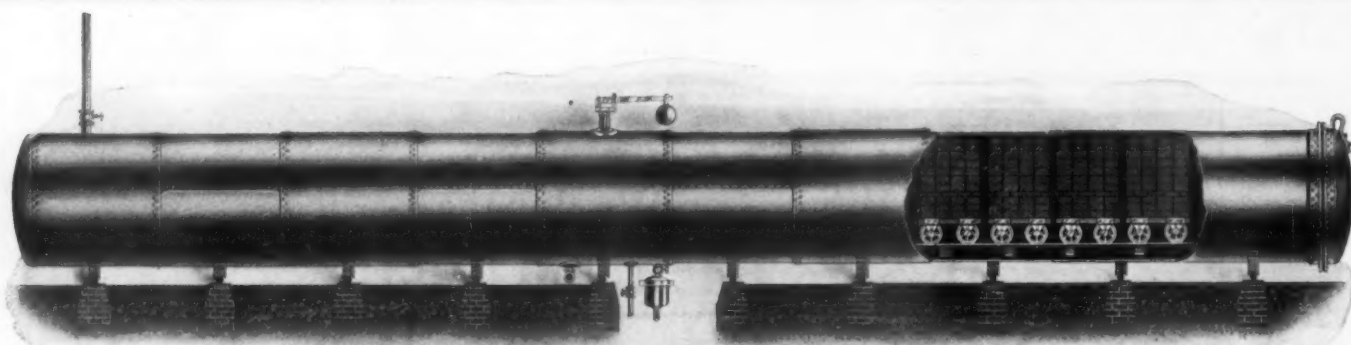
Information concerning plaster formulas furnished.

Freight prepaid on sample tons for trial order. If the retarder does not prove as economical as any made, we take the material off of your hands and make no charge for retarder used in making your tests.

Does this look good to you? Does it look as if we were afraid of the results of your tests?

THE OHIO RETARDER COMPANY, PORT CLINTON, OHIO.

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Sand-Lime Brick Machinery

Our Sand-Lime Brick Machinery is at least a little better than any other. We have testimonials to show it. We build it all in our own factory and are sure of its quality. We are the only firm doing this. We will design and equip your entire plant or will sell you parts of your equipment. Our catalog describing and illustrating our full line will be sent upon request.

We also build a full line of machinery and appliances for making Clay Products, Cement and Pottery, Dryers and Dryer Apparatus.

Everything we sell we make. We therefore know its quality to be right.

The American Clay Machinery Co.,
BUCYRUS, OHIO, U. S. A.

Sand-Lime-Brick Plants

FULLY UP-TO-DATE

Every New Principle and Appliance Supplied

WOULD you not rather buy from a firm which builds everything that goes into the plant, and stands back of its quality than from a firm that farms out a good proportion of the contract? Give us the location, we do the rest and you have no worry, either during the building of the plant or after it is started. Our plants go right. Our experience in the business started with one of the first plants installed. Our machinery is automatic. Our products uniform. Our capacity exceeds our claims. Write to us and get many good pointers.....

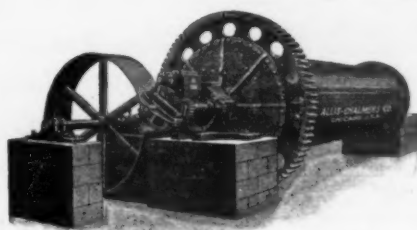
The
Morris-Sherman Manufacturing Co.
CHATTANOOGA, TENNESSEE

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Allis-Chalmers Company

Cement-Making Machinery

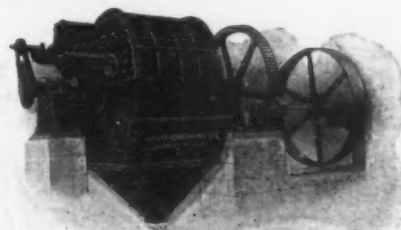
for every stage in Cement making by either the Wet or Dry Process.



Gates Tube Mill.



Style "K." Gates Rock and Ore Breaker.



Gates Ball Mill with Feeder Attached.

Ball Mills

Tube Mills

Kilns

Conveyors

Rock Breakers

Crushers

Dryers

Elevators

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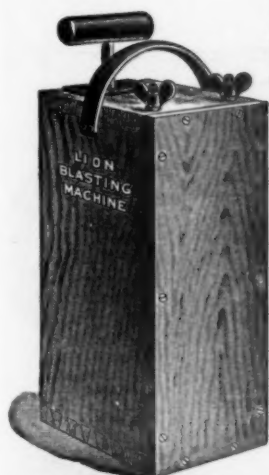
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ARE THE BEST

If you do not fire
your blasts by elec-
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send for the booklet

"FIRING BLASTS
BY ELECTRICITY"

Which tells all about this method.
If you are already using fuzes, you should
have the book anyhow, as it contains many
valuable hints. Sent free.



No. 1, Capacity, 8 Holes
No. 3, Capacity, 25 Holes
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POWDER
COMPANY

143 Dearborn Street, CHICAGO



Modern Grinding Machinery

KOMINUTERS for granulating
TUBEMILLS for pulverizing

Davidson Tubemill especially
adapted for Sand-Lime
Brick Work.

Silex Linings for Tubemills
Best Quality Dana Flint Pebbles
Forged Steel Balls

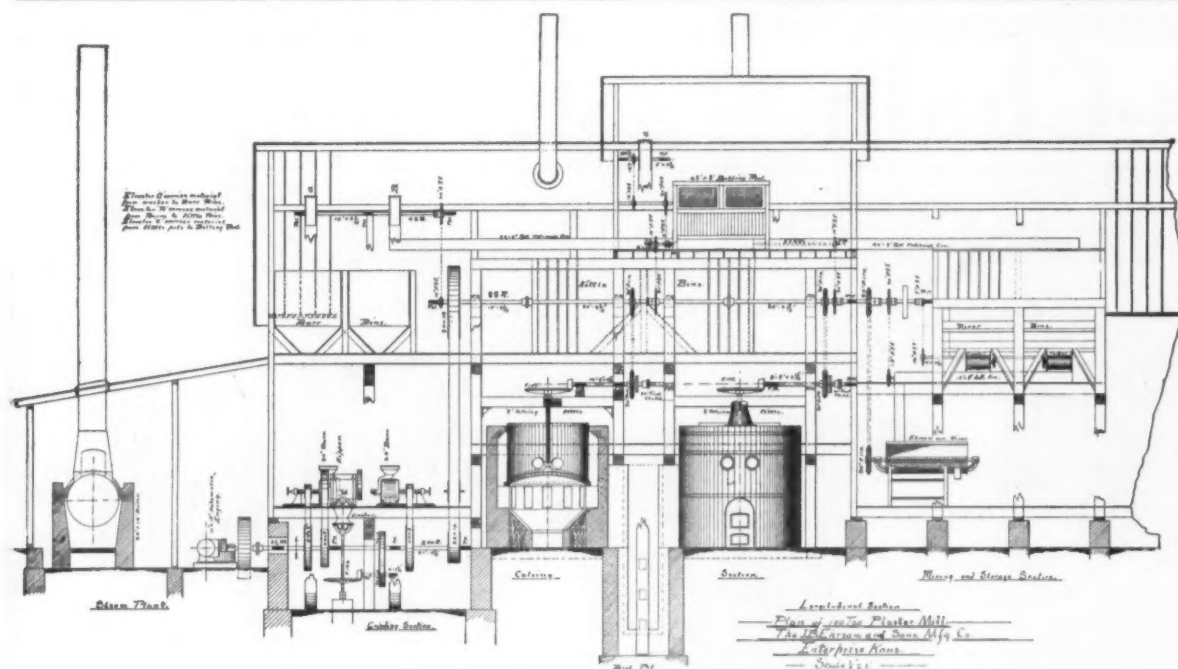
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ENGINEERS

41 Cortlandt St.,

NEW YORK

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Calcining Kettles
Jaw Crushers
Rotary Crushers
Bolting Reels
Shaking Screens
Turkey Emery Rock
Burr Mills
Plaster Mixers
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Conveying, Elevating and Power
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Machinery.

We are prepared to submit plans and estimates for the complete equipment of wall plaster mills, and furnish all machinery required of our own manufacture and design. **Special Machinery to meet special requirements.** Twenty years experience in building and equipping Wall Plaster Mills. New Catalogue in press. Write for a copy. Address

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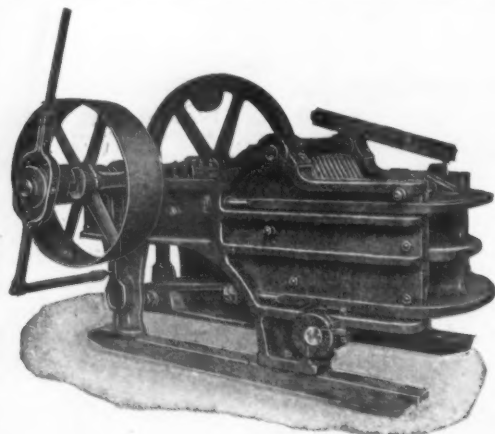
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KETTLES, CRUSHERS, NIPPERS, ETC.

We are now building the new Plymouth Mill at Fort Dodge, Iowa, the finest mill in the United States.

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DES MOINES, IOWA.



CRUSHERS

for soft rocks, burnt lime, etc.

GYPSUM MACHINERY.

We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhrs, Screens, Elevators, Shafting etc.

SPECIAL CRUSHER-GRINDERS FOR LIME HYDRATORS.

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17 Huron Street, GRAND RAPIDS, MICH.

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WE SELL COOPERAGE

Quality High. Attractive Prices

That's the Double Impression we aim
to give our Customers

We Want Your Business

Shipments Made From
Mills Located in the

North, East, South and West

YOUR NEXT ORDER WITH
"BELL IN THE BUSINESS 50 YEARS"

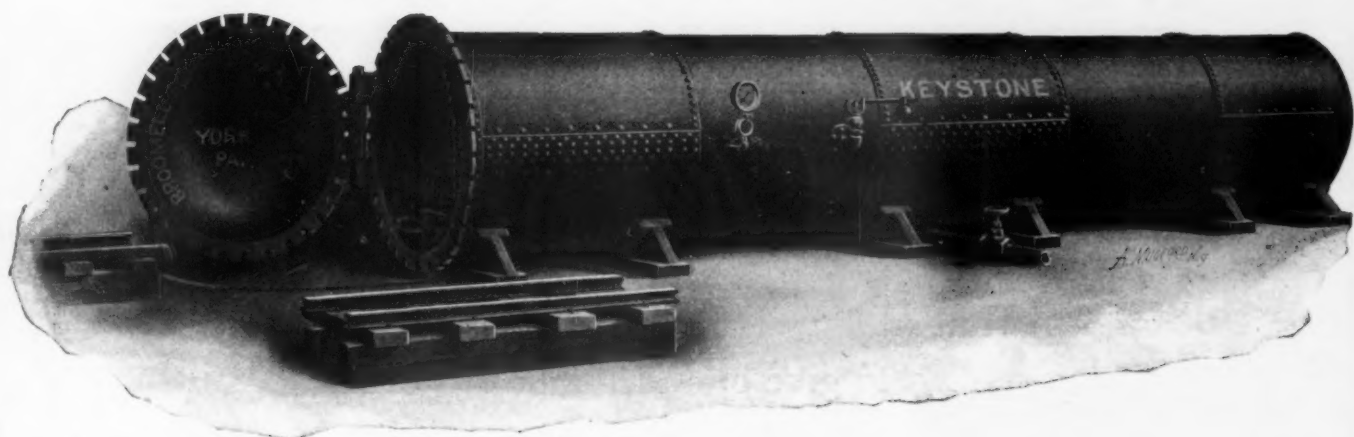
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SPECIAL WORK OF ANY KIND BUILT FROM BLUE PRINTS.



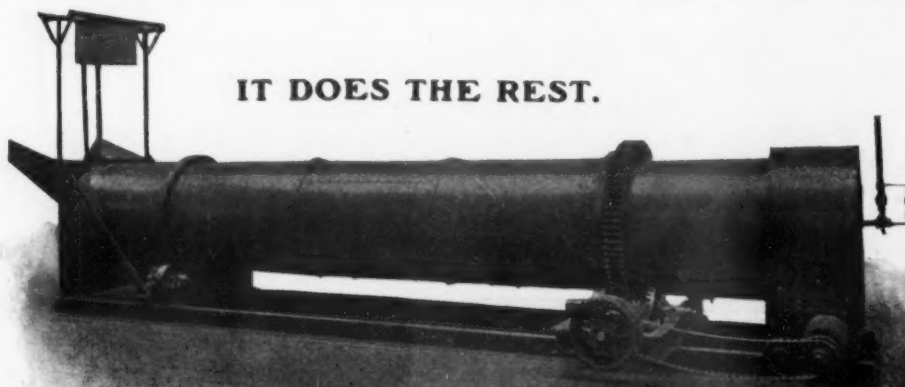
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HYDRATED LIME!

SIMPLEST, CHEAPEST, BEST—CONTINUOUS, AUTOMATIC PROCESS.



IT DOES THE REST.



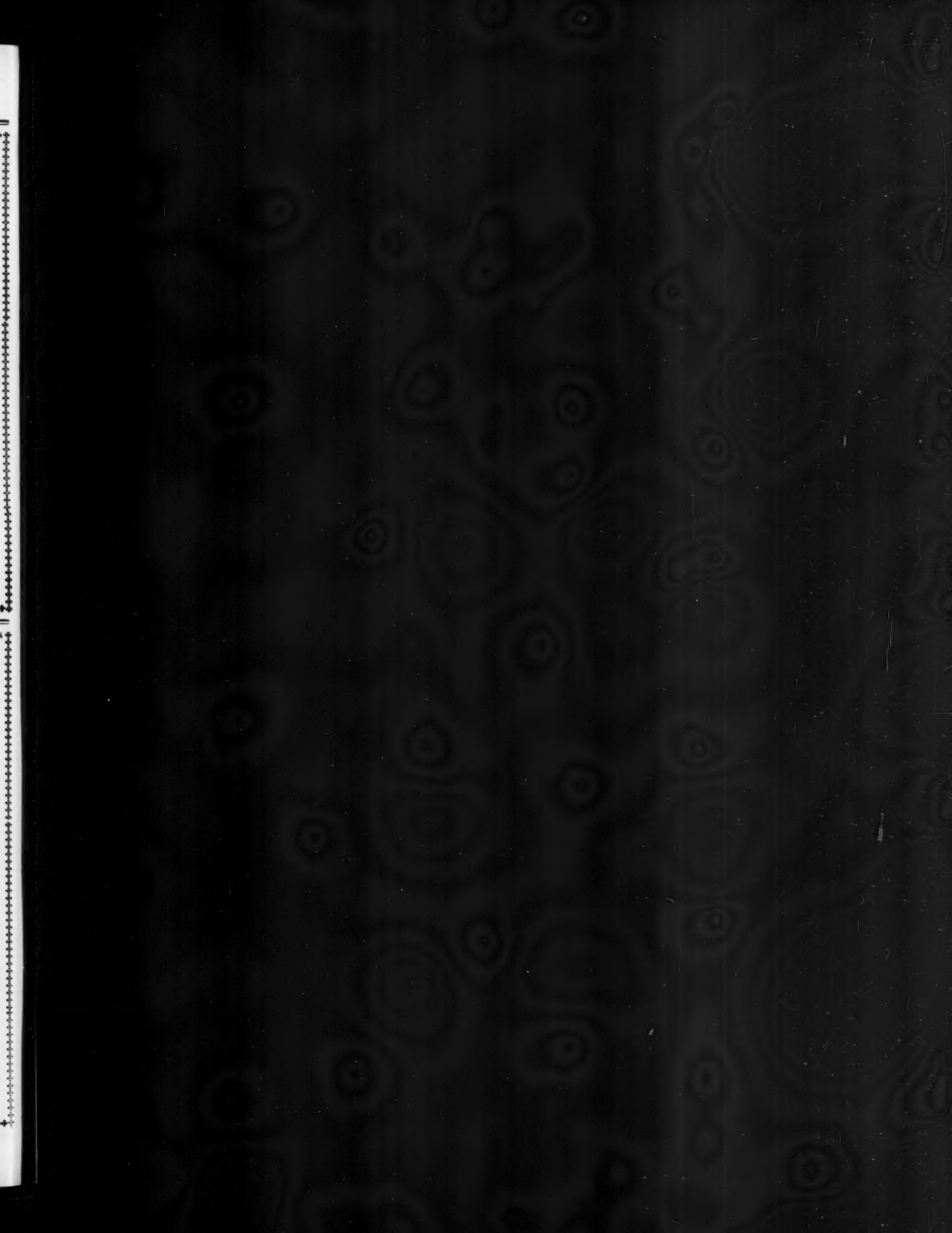
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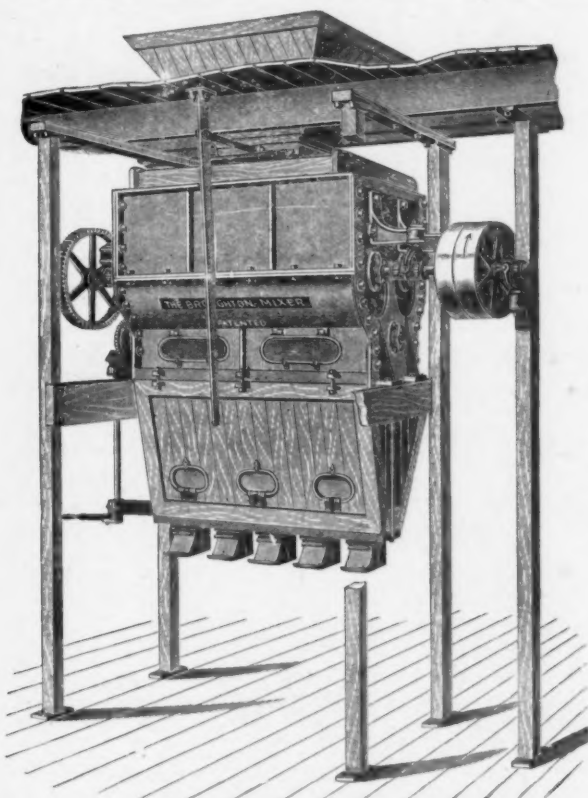


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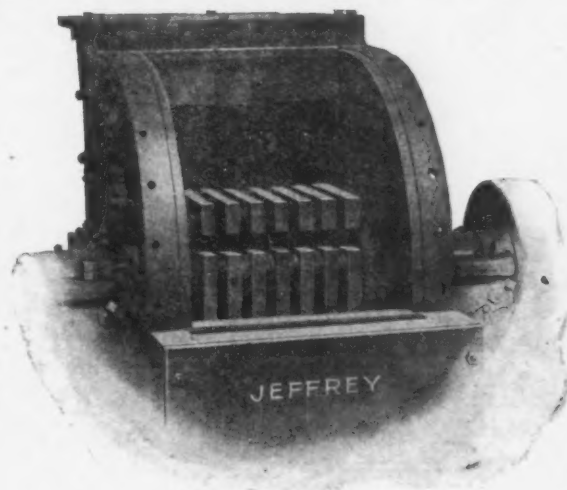
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Mixers of Plaster, Cement and
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In these days of Stock Jobbery and Frenzied Finance, conservative business men are turning toward manufacturing industries as a safe, tangible, reliable investment which is not here to-day and gone to-morrow.

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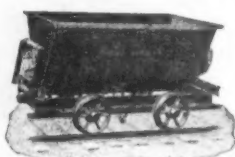
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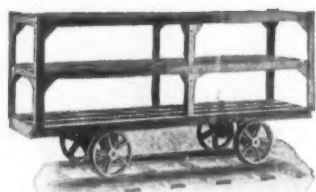
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